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ART. I.—*Histoire de la République des Etats Unis, depuis l'Etablissement des Premières Colonies jusqu'à l'Élection du Président Lincoln (1620—1860).* Par J. F. ASTIE. Précedée d'une Préface par M. ED. LABOULAYE. Paris: Grassart.

THE differences between England and America are neither few nor unimportant; yet intelligent foreigners are invariably of opinion that both Englishmen and Americans are disposed to over-estimate them. It is probable, that the very closeness of the relationship between the two nations makes them all the more sensible to the contrast between their political institutions and social habits, wherever it does exist. When an inhabitant of either country visits the other, he does not so much find himself in a foreign land, as in his own changed; and he is naturally inclined to say changed for the worse. The race is one and the same, not only because the great majority of the whites of the United States are descended from British ancestors, but, also, because the additional immigrants have been of Germanic and Celtic origin, with an inter-mixture of noble Huguenot exiles; that is to say, the part of the American population not immediately proceeding from the original English stock, consists of elements ethnologically identical with those of which that stock was composed. The two nations are one in language, in literature, and in their

imperial memories up to the last ninety years. They are one in religion, in their love of liberty and self-government, in indomitable perseverance, manly solicitude to know the worst in the hour of peril, and in aptitude for manufactures, trade, and colonisation. The jealousy with which they look upon each other is that of rivals in the same pursuits, and near relatives whose differences are embittered by the same hereditary defects of character. Like the uncle and the nephew in the tale of "Redgauntlet," an unmistakeable family resemblance can be recognised in the very shape into which their brows are knit as they frown upon each other.

For this reason Englishmen may always study with advantage the labours of disinterested and philosophic foreigners upon the history and institutions of our transatlantic cousins; it was De Tocqueville's work upon American democracy that first introduced that lamented writer to English readers; and it certainly did help us in some degree to understand the Americans and ourselves better than we did before. Professor Astié's two substantial volumes present a summary of their history from the landing of the earliest colonists to the election of Abraham Lincoln, with a thorough exposition of the practical lessons to be learned from it, by an observer situated, like De Tocqueville, outside the circle of our national jealousies, and at the same time sympathising with everything good in the general tendencies of both countries. Of course they do not contain any facts that are not to be found in works already within reach of the English reader; but the whole literature of the subject has been digested, the facts are selected, grouped, and summed up with the tact and lucidity of the French mind, and their philosophy is unfolded without any of that hasty and imperfect generalisation with which so many French writers are deservedly reproached.

"There are many ways of writing history," says M. Laboulaye, in his preface. "One may follow the succession of events step by step, retrace the lives of celebrated men, study changes of policy, laws, and institutions; in a word, write the external history of a people. One may also, by a method, bolder, and not less sure, install oneself at once in the heart of the place, show what is the genius of this people, what the idea that it represents in the world, and how its national life is but the development of the germ that was born along with it. It is from this latter point of view that M. Astié has conceived the work he now offers to the public."

There are men whose lives are interesting chiefly from the stirring scenes through which they have passed; but when a

man's life is worth studying for his own sake, every wise biographer will dwell upon the influences which helped to form his character, rather than upon the incidents which befell him, except in so far as the latter form a part of those influences. And the first part of every such man's life is, therefore, the most interesting for the thinker. It is with this feeling, doubtless, that Professor Astié treats of the religious history of the Puritans and their descendants at a length which, at first sight, may seem out of proportion with the space given to their secular history; a hundred pages are devoted to the doings and writings of Roger Williams, and the revival of the eighteenth century takes up more room than the War of Independence. He has thus drawn the attention of the French public to that side of American history which was least known to it; and, to speak with M. Laboulaye, he has erected a monument to Protestantism. The starting point, the religion of the Gospel in its most austere shape, continues this eminent publicist, explains the whole history: "Liberty is the child of religion in America, and, therefore, she has resisted every storm; while in France she is the child of revolt, and has been always ruined by her own excesses. In America she creates institutions, while with us she does but destroy them." Alas! the contrast between the spirit of the two nations is but too aptly suggested by the inscription which, we have somewhere read, was set up upon the site of the ruined Bastile, "*ici l'on danse!*" The same year, 1789, witnessed the adoption of the present federal constitution, after a great deal of mismanagement and dissatisfaction, and the beginning of the French Revolution, when every heart beat high with hopes that were soon to be so cruelly disappointed; how differently have the intervening three quarters of a century been employed by the two countries; how different are their prospects at the present moment.

The work naturally begins with the circumstances which led to the first Puritan emigration. The Reformation in England, says Professor Astié, was not favoured by the agency of any master mind like Luther or Calvin, able to take up a position of its own in the heart of Christianity, and carry the nation along with it, for Cranmer was the docile instrument of every man powerful enough to frighten him. The want of a leader of commanding capacity and heroic stamp was probably one reason of the religious indifference which characterised the English more than any neighbouring people during the quarter of a century preceding the accession of Elizabeth. "The English in general would become Jews or Turks if it

were the good pleasure of their sovereign." So wrote the Venetian ambassador, Michel; and when one thinks of the changes that succeeded each other, so easily and almost so universally, under Henry VIII. and his three children, the sarcasm can hardly be called a calumny; England had neither its Huguenots nor its Catholic League. Men really in earnest about religion were, indeed, in a minority in all countries; but in England the minority on either side was for a considerable time too trifling to become of any political importance. The Tudors were obliged to reckon with the nation, and to yield to it, when they found that measures they had attempted to take were decidedly unpopular; they could not easily impose new taxes, for instance; but in the sphere of religion none but a few martyrs dreamt of resisting their powers. Paris endured all the horrors of a famine rather than open its gates to Henry IV. so long as he remained a heretic, while London passed almost without a protest—once from the Reform to Rome, once and again from Rome to the Reform. At the accession of Mary, out of a parliament of 300 members, only two refused to throw themselves at the feet of Cardinal Pole, begging to be reconciled to the Church, and their opposition was drowned in the laughter of the house, so preposterous did it seem.

The controversies existing in the early part of Mary's reign between the representatives of various schools of Protestantism, gradually died away during the days of persecution and exile, so that Elizabeth found herself among the least anti-Romanist of the Protestants of her kingdom. Many of her determinations were opposed to the unanimous wishes of all earnest reformers; a motion made in the Convocation of 1562, for the further purification of the services of the Church, was only lost by a majority of one in a house of 117 members; and Professor Astié considers himself justified in saying that the Anglican system was a compromise between the religious party and that of the politicians, who only cared to throw off the Pope's supremacy, and retain the property of the Church. We would remind him, however, that if Elizabeth imposed this compromise upon the religious men of the time against their will, she was sustained in so doing by the general feeling of the nation. The increasing knowledge of Scripture, the horror inspired by the recent fires of Smithfield and Oxford, the popular feeling of contempt for the religious orders, and of antipathy for Spain—all these causes combined, led the nation to acquiesce more heartily than before in the repudiation of all allegiance to Rome, while with that dislike of

extremes and that instinct of conservatism which it has since exhibited in other spheres, it wished the change to be confined to things in which change seemed absolutely necessary.

It was characteristic of the want of religious earnestness in the masses, and the want of genius and independence in the leaders, that under Edward VI. the Church of England had its Book of Common Prayer before it had a confession of faith ; and, as the articles of religion came latest, their contents were more decidedly and consistently evangelical. Elizabeth's first care, again, was to proclaim her supremacy, and to establish uniformity in the celebration of divine service throughout the kingdom : it was not until after the lapse of thirteen years that the articles of religion were established by the authority of the Queen and Parliament (1571), and that the people were officially informed what they were to believe.

Meantime, religious life was becoming gradually more general. In 1583 thirty-seven out of the ninety-eight ministers of London were ejected for nonconformity, and 233 others in six adjoining counties. The sufferers were partisans of a presbyterian, in contrast with the episcopal, theocracy ; and were, therefore, in their own way as much mistaken as their persecutors ; but the simple fact that so many of the clergy were now ready to suffer for conscience' sake, shows that religious convictions had got a much greater hold upon the mind of that generation than of the preceding. If English Protestantism wanted a *head*, it did not the less grow into a *body* capable of strenuous doing and suffering. From this time forward ruinous fines, exposure in the pillory, slitting of noses, cutting off of ears, was every-day work with the Court of High Commission. Two ministers, Thacker and Copping, were hanged for circulating a tract against the Liturgy ; many others died of cold and want in the loathsome prisons of the time into which they were thrust with insufficient food and covering, and without fire or bedding. Archbishop Whitgift and his commissioners, not satisfied with punishing overt acts of nonconformity, framed a long list of captious interrogatories, to which their victims were obliged to give distinct answers upon oath, because, as his Grace explained to Lord Burleigh, he "would not be able to make quick despatch enough with the sectaries" if they were not compelled to become their own accusers.

The discovery of a congregation of Brownists, or Independents, in London, 1592, led to three immediate, and many lingering, executions. An Act of 1593 condemned every person above the age of sixteen, who should absent himself for one

month from his parish church, to be put in prison until he should profess repentance, and promise conformity for the future. Those who refused to do so were to be sent out of the kingdom, and, if they returned, to suffer death as felons. And this inquisitorial rigour reigned in England at a time when the Protestants of France enjoyed toleration and rest! The persecution increased in intensity at the accession of the imbecile, but bigoted and heartless, James; in the single year 1604, 300 ministers were ejected and imprisoned, or exiled.

All educated people among us are as well acquainted with the story of the "Pilgrim Fathers" as the Americans themselves. How the little church of Scrooby, in Nottinghamshire, made their escape in a body to Holland, that they might serve God and bring up their children in peace, without being exposed to languish away in a noisome dungeon, or perish on the gibbet. How Holland proved a less hospitable soil than it might have been, and far less than they had hoped, a land of righteousness, and the hearts of these men of prayer pined for some unoccupied corner of the world where they might set up their own ideal of a Christian commonwealth, and provide for their children a refuge from the corruption which they thought was increasing around them. How, after much delay and trouble, influential friends in England succeeded in obtaining permission for them to settle in the then imperfectly known region called the northern parts of Virginia, with an intimation that uncanonical practices might be overlooked there. How, finally, one cold November day, in the year 1620, the "Mayflower" reached Cape Cod; while great whales sported undisturbed in the bay, and 120 exiles landed on the frozen and unpromising shore, where the graves of half their number were to be dug during the winter. A young girl, graceful representative of so many future maidens and matrons, was the first to spring upon the beach.

A colony of Huguenots, under the auspices of the Admiral de Coligni, had already attempted to settle in part of the modern state of Georgia, to which they gave the name Carolina, A.D. 1564. Their establishment, upon the river Alatamara, was, however, attacked by the Spaniards, under Don Pedro Menendez, and the inhabitants of all ages and both sexes mercilessly massacred, the murderers erecting a cross with their blood-stained hands, and building a Catholic church amid the ruins they had made. When this atrocious deed had been avenged by a brave French adventurer, Dominique de Gourgues, he was disavowed by Charles IX.

Not to speak of two or three other abortive undertakings, the English settlement on James' River, in Virginia, was also older by fourteen years than that of the Puritans. It was made under circumstances much more promising than theirs, upon a most fertile soil, under a clement sky, by emigrants more numerous, sustained by the patronage of the King and the aristocracy, as well as by the wealth and enterprise of the principal merchants of London. But the emigrants were morally of a different order from those who sought refuge in the wilderness of Massachusetts, so that the enterprise was repeatedly on the eve of being abandoned. The first difficulties had at last been overcome at the moment those of the northern settlers began; the prospects of the colony seemed secured; it received 3,500 new comers in the course of three years, and Smith, the singular adventurer, to whose energy it had more than once owed its preservation, spoke in language of pity and contempt of the handful of obscure and ignorant sectaries, who, at New Plymouth, were enduring infinite hardships to very little purpose.

The Puritans had not only to struggle with disadvantages of soil and climate, and with the intrigues of adventurers, who were continually taking out patents for the colonisation of territories they occupied. Difficulties of various kinds arose from the proceedings of the commercial company, under whose auspices they had proceeded to their destination, and most of whose members had no sympathy with their views. The company had accepted the Independents as persons most ready to undergo the dangers and labours of a first establishment; but when they saw that the religious character of the colony created a prejudice against it, and lowered the market value of their shares, they tried to wipe away the reproach by hindering the departure of other Puritans. The venerable John Robinson, himself, the original pastor of the church of Scrooby, died in Holland without ever having been allowed to set his eyes upon the land, the future of which took up so large a place in his thoughts and prayers. Not content with this, they sent out settlers hostile to the tendencies of the Pilgrim Fathers, in order, if possible, to leaven the infant colony with a different spirit; and these unwelcome companions became a cause of frequent dissensions, of danger from the Indians, whom they irritated by their rapacity and violence, and of vexatious interventions from the mother country, which they filled with complaints and calumnies. By the most unwearied exertions and economy, and through the generous devotedness of some of the least indigent of their

number, the emigrants succeeded after some years in buying themselves free from the claims of the company for £1,800, and in paying the passage of those among the members of their congregation still remaining in Holland, who were ready to share the fortunes of New Plymouth. The last detachment arrived in 1630, and made the Puritan element predominant in the settlement.

To borrow a comparison from the farewell discourse of John Robinson, the Plymouth colonists proved to be stepping-stones thrown into the river to enable others to cross the more easily. A company called at first the Dorchester Adventurers, formed in 1623, with a capital of £3,000, procured a royal charter, authorising a new settlement in Massachusetts Bay, having power to choose their own magistrates, and make their own laws, provided they should not be inconsistent with the laws of the mother country. Three hundred colonists went over in six ships, in the spring of 1629, followed by one thousand more before the winter of 1630-31. Unlike their humble predecessors, the leaders of this second Puritan emigration were men of some rank, wealth, and political experience, who, despairing of reform at home after the dissolution of the Parliament of 1629, sought to secure an asylum beyond seas. More than one of the number, including the younger Sir Harry Vane, afterwards returned to England, and figured in the Long Parliament, and in the great civil war. England had never enjoyed so much material prosperity as in the years immediately preceding, and many of the exiles gave up positions where they were surrounded by every comfort, and accustomed to all the refinements of cultivated society, for the rude labours, dangers, and privations of life in the wilderness. What a contrast, suggests Professor Astié, between the wretched little vessels to which a handful of heroic idealogues intrusted themselves, and the mighty steamers in which their children now plough the ocean, or ascend the broad rivers of the continent they fill. The little one has become a thousand, and the small one a strong nation.

Boston was one of the settlements founded in 1630, and John Winthrop, of Groton, in Suffolk, was the first governor of Massachusetts; a man to whose generosity, moderation, wisdom, and firmness, the infant colony owed so much, that it has been said with truth there is not a man now living in America that is not indirectly indebted to him.

Stragglers from the two older settlements began to establish themselves on the river Connecticut, in 1633; and three years later, being then 800 in number, they declared themselves

a distinct and independent colony. Newhaven, which was afterwards to be associated with it, was founded in 1638, by Theophilus Eaton, who had been British Ambassador in Denmark, and John Davenport, an eminent scholar at Oxford.

In the south also, and in the centre, the work of colonisation proceeded. Some Roman Catholic gentlemen began the settlement of Maryland in 1634, under a patent granted to Lord Baltimore. The Dutch colony of New Amsterdam, on the Hudson, dated from 1629, and Huguenots, who left their country after the destruction of La Rochelle, contributed to its population almost as much as the Dutch themselves, so that in 1656 the acts and notices of the authorities used to be printed in Dutch, French, and English.

The great Gustavus Adolphus early fixed his attention on these shores, that seemed to invite the adventurous, the oppressed, and the distressed, of the Old World to go over and take possession. After his death, Chancellor Oxenstiern began to carry out his plans, and in 1638 the log-houses of a "New Sweden" arose upon the river and bay of Delaware. This settlement was seized by the Dutch in 1655, but during its short existence under the protection of Sweden, it imitated Rhode Island, in refusing, from the very first, to allow of the importation of slaves upon any pretext. It is in singular contrast with this honourable distinction, that of the two states which now occupy this territory, New Jersey is the least anti-slavery state of the North, and Delaware will apparently be the last slave-holding one to renounce the institution.

While most of the future United States were founded by men flying from persecution in Europe, these victims of religious zeal had not the least idea of establishing a reign of universal toleration in their new home. Nay, those whose co-religionists in Europe were their most remorseless persecutors were led by circumstances to be among the least intolerant on the other side of the waters. Lord Baltimore's Roman Catholics wisely concluded that the safest and surest way of making the profession of their own religion legal, was to proclaim the toleration of all orthodox Christian sects upon the soil of Maryland. Virginia, too, was liberal at first, and though, when the civil war broke out, the colony, in its zeal for the monarchy, prohibited any ministers, except those of the Church of England, from preaching or teaching in public or in private, the measure was enforced for a few years only.

It was otherwise with the first Puritan settlers; and the

close and sagacious analysis with which M. Astié shows how the principle of intolerance was necessarily bound up with all their other convictions, is not the least merit of his book. The Pilgrim Fathers introduced into the foundation of their scheme of ecclesiastical and civil polity the same radical error which in various shapes had been making the world miserable for so many centuries: that is to say, they believed Church and State to be identical *de jure*, and aimed at making them so *de facto*, by legally subordinating the civil and political to the ecclesiastical society.

The Romish ideal of the relations of Church and State, set out from the same hypothesis of the identity of the two societies, and involved the same doctrine of the subordination of the latter. It supposed the Church, however, to be represented by and completely concentrated in its hierarchy. The Pilgrim Fathers' ideal was that of a Christian theocracy as much as the Romish, but it made the Church to consist of all its members; it not only repudiated the substitution of a sacerdotal body for the whole religious community, but jealously guarded against the formation of such a body at all. The American Puritans did not aim at the exaltation of a caste; theirs was zeal for God, and not for their own power or self-love. It was an honest and unselfish effort to realise a popular government for religious purposes, according to the type of doctrine and polity which the members of the church held to be the only Scriptural one. They did what in them lay to establish a reign of righteousness, to make the law of God the law of the land, and the will of God the rule of all public and private life.

The ideal that prevailed in the Greek Church, and in all the Established Protestant Churches of the sixteenth century, involved the same common ever-recurring assumption of the identity of Church and State, but, unlike that of the Romanists and the Puritans, it subordinated the ecclesiastical to the political society, represented generally by the prince, and sometimes by republican councils. We do not here enter upon the question of Church and State, as it remains a matter of discussion in these realms. The Church of England is favoured by the State; it has prerogatives as such; its canons and formularies may exhibit traces of the confusion that once reigned between the characters of the citizen and the worshipper; but it is not now treated as the only form of religion that can be tolerated or recognised, and from which a British subject cannot attempt to withdraw without offending against the laws of his country; that state of things

which the Tudors and first Stuarts attempted to establish among us through a century and a half of conflict and countless cruelties has been abandoned for ever. Unfortunately, it is not so everywhere : there exist in parts of Switzerland Protestant States in which no form of Protestant Dissent is tolerated ; every citizen belongs, by law, to the Established Church, and, at the same time, the fact of his citizenship gives him a vote in all matters ecclesiastical, in the election of pastors, of deputies to the synod, &c., and the right is frequently exercised by avowed infidels. This system of popular Church government is also at this moment extending itself in Germany.

The Puritans' scheme certainly contrasts favourably with the Erastianism of the Byzantines, and their imitators in the sixteenth century, and in the nineteenth. They took up the idea of Church and State in earnest, and with a single eye to the interests of true religion ; they gave the supremacy to the nobler of the two societies, to that which had the highest object in view, making the purposes of the Church their *end*, and the power of the State only part of the means used to effect that end ; whereas the contrary system makes religious agencies to be but the humble instruments for carrying out the prejudices, the caprices, the selfish purposes of the sovereign, whether that sovereign be the multitude, or some individual despot. This is a false and inverted theocracy, body and soul confounded in order that the body may insolently assume the mastery.

And yet the fundamental error of the Puritans is betrayed by the simple fact that they were fatally constrained by it to try to make men religious by law, and to punish both the irreligious and those who religiously and conscientiously differed from them. John Robinson asserted that the Church of England was no church at all, because it consisted of all the members of the nation indiscriminately, instead of serious professors ; but he and his followers remained convinced that the civil magistrate should as such wield the sword in behalf of the Church, and that political power should wait upon religious profession. They did not merely seek an asylum where they might serve God in peace ; their aspirations were more ambitious, amounting to nothing less than the exhibition of the ecclesiastico-civil polity, for want of which they thought the world was going wrong. They wanted, in a word, to give their ideal of social Christianity a fair trial.

Men so disposed could not trifle with their principles ; the very earnestness which was their strength where they con-

stituted an oppressed minority, became their temptation and their weakness where they in their turn possessed power to constrain, and believed themselves under obligation to use it. In formal antithesis to our modern continental radicals, who make ecclesiastical rights depend upon political qualifications, they ordained that members of the churches only should enjoy political rights, and participate in either the local or the general government. Attendance at divine service was made obligatory on the whole adult population. In Connecticut the absenting oneself from church for a single Sunday without sufficient reasons was punishable by a fine of ten shillings; and the householder who neglected family prayers was amenable to the grand jury. The description of a Sunday at Plymouth, by a Dutch officer who visited it at an early period, when there was continual danger from the Indians, shows that it must have presented the aspect of a barrack of one of the old monastic military orders. The men were assembled by beat of drum, and fell into files three abreast, with their musquets on their shoulders, before the captain's house. There the drum ceased beating, but a sergeant led the march towards the meeting house; behind him walked the governor, on the right of the latter the minister in his gown, on the left the captain, with his military cloak, sword, and a cane in his hand. When they reached the church, each took his seat, grounding his weapon beside him, nor could he then taste the luxury that Cowper has since celebrated—

“Sweet sleep enjoys the curate at his desk,
The drowsy rector drawling o'er his head,
And sweet the clerk below....”

The first generation was probably not much troubled by the temptation to sleep in church, but at a later period a beadle was frequently employed to supplement the awakening powers of the preacher by a long stick, with a knob at one end, and a tuft of feathers at the other. The harder end of the monitory wand was intended for the sconces of such of the stronger sex as should forget their cares, the attention of fraailer offenders was solicited by gently passing the tuft of feathers over their faces.

The Puritans were led to dwell upon the Old Testament rather than the New, observes M. Astié, by the simple fact that the writings of the New Testament were addressed to believers dispersed in the midst of a society they had not founded, nor as yet modified; whereas the Old presented the historical realisation of a society such as they aspired towards, and a whole theocratic legislation in detail. Hence, the

severity of some of their laws; adultery, atheism, and blasphemy, were to be punished by death. It does not appear that capital punishment was ever really inflicted for offences under either of the first two heads; but the cruel persecution of the Quakers, and the unfortunate witch-panic somewhat later, left two dark and indelible stains on the legislation of the New England theocrats.

It is not to be supposed, however, that humanity, on the whole, was a loser by the tendency to substitute laws taken, or supposed to be taken, from the Old Testament for those that were then in force in England. On the contrary, the English legislation of the epoch inflicted the punishment of death in more than thirty cases, those of Massachusetts only in ten. The neighbourhood of every capital in Europe at that time was rendered hideous by gibbets, upon which the putrifying bodies of malefactors hung, tainting the air of heaven, an outrage upon human nature, accustoming all eyes and hearts to sights of cruelty and horror. The Puritans learned, from what Moses had commanded thirty centuries before, that God's sun should never rise upon such a spectacle, lest the land He gave them for an inheritance should be defiled (Deut. xxi. 22, 23). One of their earliest laws, moreover, was one against cruelty to animals; and the scrupulous strictness with which they gave the few negroes introduced among them the benefit of the precautions prescribed by the law of Moses for the protection of slaves, was one of the reasons why the odious institution, which has been the curse of the South, never took deep root among them.

The famous *blue laws* of Newhaven, which, for a time, used to be gravely quoted as a real code by writers hostile to the memory of the Puritans, were but the invention of a Dr. Peters, a fugitive royalist, in 1781. No prohibition was ever issued against minced pies, or mothers kissing their children on the Sabbath-day, or making beds, or shaving on the Sabbath, nor against the use of musical instruments with an exception in favour of the Jews'-harp. But the extreme views and regulations of the New Englanders certainly left them open to this species of misrepresentation: the caricature, like every clever one, was a likeness, however exaggerated the features. Parish officers were really ordered to watch that there should be no bathing in the river on the Lord's Day, and no long walks without necessity. Newhaven, in particular, was slow to adopt the institution of trial by jury, because it was not to be found in the letter of the Old Testament.

Calvin succeeded in establishing Puritanical manners for

one or two generations in Geneva, because the convictions of the austere and single-minded reformer were really communicated to a great many minds, and because the very safety of the little city was associated in the feelings of the people with the institutions which had saved it from anarchy and from conquest by its powerful neighbours. In Holland, likewise, in England, and in Scotland, the same cause was temporarily associated with the defence of national liberty. In all these countries, however, the really religiously minded were probably a minority; in England, at least, Puritanism sat upon the nation generally about as easily as a lasso upon a wild horse. In New England, on the contrary, for the first half-century, the majority were decidedly religious, and the system they attempted to establish certainly appears less repulsive than its equivalents in Europe, because Independency aimed at a popular theocracy, whereas the place given to the clergy by Presbyterianism made the Puritanisms of Europe so many attempts to establish aristocratical or caste theocracies. If religious life could have been imposed upon men by authority and external means, we may boldly say the attempt would have succeeded here, where it was made on a virgin soil, under the most favourable circumstances, by some of the best of men, sustained by the highest and purest motives. And, as men are never cured of an error until it has been put to the proof in every possible shape, it is well that the experiment was tried in these conditions. If there is no part of the world at present so anti-theocratic as America, none in which the two societies, civil and religious, have so completely consented to each other's co-existence in friendly distinctness, like a right arm and a left, it is, probably, just because the experience of the contrary principle was carried out more completely here than in any other Protestant country. When John Robinson solemnly warned the exiles, on the eve of their departure from Leyden, to be ready to embrace every truth God might yet have in reserve for His people, he little thought their descendants would pursue the same noble end—the development of a Christian commonwealth, by means so unlike those they were about to employ.

The disgust with which a population naturally regards religious ideas and practices which have been more or less felt as a yoke, was rendered more intense in England by the feelings of hostility engendered during the long civil wars, and by the bitterness of the conquered royalists. From the accession of Elizabeth onward, a period of more than eighty years, Puritanism had been uninterruptedly gaining strength and

winning the affections of the people. But when it was so unfortunate as to accomplish a successful revolution, it thereby attracted the momentary and interested adhesion of those minds, without principles of their own, who are ever ready to flatter the strongest party, exaggerate its tendencies, and crush its rivals, until the time for deserting and turning upon it has come. The consequent reaction of the national feeling was such, that it was not exhausted by all the orgies of the Restoration ; and at the final revolution, the liberties for which the Puritans had fought, had to be secured by a very different and a very inferior class of political men. It may be said, without exaggeration, that the popular horror of religious cant, or what passes for such, created during the seventeenth century, is felt to this hour as an obstacle even to true religion, and that without the revival brought about through the grace of God, by Wesley and his fellow-labourers, it would have been almost fatal to true religion amongst us.

This feeling is not to be explained simply by the indignation with which men witness real or supposed hypocrisy, or by the vindictiveness with which they remember former oppression. There is something deeper and more peculiar here. Foolish and minute sumptuary laws were almost universal in the sixteenth and seventeenth centuries ; but those of the Puritans only seem to be generally remembered : regular attendance at divine service was obligatory throughout England, and the penalties for nonconformity rigidly enforced by all the vigilance of the ecclesiastical, and all the power of the civil, authorities ; and yet this severity has graven itself on men's minds immeasurably less, in proportion to the suffering inflicted, than that of the Puritans : cavalier Virginia passed acts, in some cases as severe as those of the northern colonies, against Sabbath-breakers, drunkards, fornicators, atheists, blasphemers, and idolaters ; but they have been altogether forgotten. It may be said that the faults of the Scottish and English Puritans have been depicted, *con amore*, by a great master ; but Scott was not the author of the feeling of which he availed himself with so much skill, and sometimes with so much injustice towards real historical personages ; he was, himself, actuated by the general pre-existing instinct ; his readers were prepared for the characters he exhibited.

The fact is that the human mind is impatient of the inconsistencies and self-contradictions cleaving to the best causes and the greatest men, precisely in proportion to the excellency of the cause or the person. *Noblesse oblige* ; there is a perilous responsibility attending the profession of devotion to truth

and goodness. There is that in any lofty conception of individual or collective Christian life, which makes the attempt to impose it by external and arbitrary measures appear meaner and more insupportably odious than any other form of tyranny. The higher the ideal, the more surely we feel, in the depths of our consciences, that it is to be freely embraced, and that it should not be disfigured by anything out of keeping with its greatness and austere beauty. We only smile when Bossuet calls out in an assembly of French prelates, "They who have not faith to fear the invisible blows of your spiritual sword, must needs tremble at the sight of the royal sword. Fear nothing, holy bishops: if men are so rebellious as not to believe your words, which are those of Jesus Christ, rigorous punishments will make them feel their force, and the royal power will never fail you. The admirable spectacle makes one cry aloud with Balaam, *Quam pulchra tabernacula tua, Jacob!* O, Catholic church, how fair art thou! animated by the Holy Spirit, united by the Holy See; kings keep watch around thee: who shall not respect thee?" The great Romanist orator only acted after his kind when he thus practised the key-note on which he was soon to celebrate the revocation of the Edict of Nantes; but it is with very different feelings that we see all the surviving reformers of his time congratulating Calvin on the burning of Servetus. What, though the victim himself believed that heretics should be put to death? That one judicial murder inevitably makes a stronger impression than the sacrifice of a whole hecatomb by the bloodstained hands of Roman inquisitors. The severity of the world's judgment is the world's homage to the moral worth of the man, and to the superiority of his religion.

To Roger Williams belongs the honour of having made the first protestation against the principle of religious intolerance—we mean the first practical protestation by a political ruler. Tertullian, and other fathers of the early persecuted church, had proclaimed the dependence of the human conscience upon God alone as an abstract principle. Other fathers had disapproved of the persecution of heretics by Christian emperors. To Michel de l'Hôpital, and a very few other pious Catholics of the sixteenth century, the same praise is due. William the Silent would have anticipated the inauguration of religious liberty by half a century if the assassin's hand had not cut short his days, and, even as it was, Holland had gone farther in this direction at his death than any other country in Europe, except Poland. But unfortunate Poland too soon allowed the Jesuits to remove her crown, and the tol-

ration of Holland remained more or less empirical, inconsistent, and vacillating; so that the microscopic little state of Rhode Island was the first political society that rested a practical religious liberty, the most unreserved and steadily maintained, upon a principle clearly understood, the Christian principle of respect for the human conscience as a domain reserved for God alone.

Williams, when a very young man, in humble circumstances, attracted the attention of Sir Edward Coke, who generously sent him to Oxford, and destined him for the bar. He finally took orders, though his fondness for controversy, his abuse of logic, and tendency to push principles to their extreme consequences were probably in some degree due to his legal studies. He went to America as early as 1630, hoping to find upon a soil free from the incumbrance of Old-World traditions, room for the development of all the liberties on which his heart was already set. But he soon found, says Professor Astié, that the post of honour which truth reserves for the most faithful and devoted of her children, is that of laboriously grubbing up, clearing, ploughing a stony and thorny soil, and throwing in abundant seed season after season, without ever in their own persons reaping the reward of all their toil and sacrifices. Hardly had he landed, when we find him scandalising the good people of Boston, by affirming that they had no right to punish men for Sabbath-breaking, or, in general, for any violation of the first table of the law. It was only of our duties towards our fellows, he insisted, that the magistrate could be cognisant; even if the Church were in danger of falling into heresy or apostasy, the civil authorities had no business to interfere. He also got into trouble by questioning the right of European discoverers to take possession of distant countries, without regard to the prior occupancy of the natives, though this was only a matter of abstract speculation; he did not accuse the colonists of having wronged the Indians, for they had actually, in some cases, paid for the same lands twice over, to different tribes.

After much discussion, during which the innovator was not always moderate and forbearing, but was upon the whole harshly treated, Williams was sentenced to be sent out of the colony within six weeks; this was at the close of 1635. In order not to be sent back to England by force, he left his wife and children in the middle of winter, and took refuge with the Indians of Narragansetts Bay, whom he had already visited as a preacher. Being followed by some friends, who remained faithful to him in adversity, they founded, in July,

1636, the settlement which still bears the name of Providence. In the social contract which they drew up, they promised obedience to all the laws and regulations that should be established for the public weal by the majority of householders, but they did not fail to add, exclusively in civil matters.

The people of Massachusetts looked upon the new settlement as a focus of all lawlessness and political contagion. They prohibited all commercial intercourse with it, refusing to allow the exiles to purchase at Boston the provisions, the seed, and the instruments of agriculture, which appeared indispensable to the success of their undertaking; nor would they consent to recal the sentence of banishment after Williams had, upon their solicitation, used his influence to hinder the Narragansetts and Mohicans from joining a general confederacy of the red men against the colony, and even induced them to take up arms in its favour.

Williams also used his extraordinary influence over the natives to save the Dutch settlement on the Hudson, the future "empire city," from almost certain destruction. He then went to England, where the great civil war was raging, to procure from the colonial commissioners of the Parliament a charter for his colony; it was dated March 14, 1644. He did not return to America immediately, but stayed in London to publish his key to the Indian tongues, and various controversial writings, especially *The Bloody Tenet*, in which he anticipated all the arguments that the advocates of religious liberty have since used against State interference with the consciences of men. He owned that the Old Testament gave magistrates the cognisance of sins, as well as offences, but asserted that the miraculous institution and sanction of the theocracy made it an exception in the history of the nations; no government could claim the like prerogatives now, pointing like it to a visible investiture by the Almighty, or in default of this possessing power to discern all truth. The prince, who is also member of a church, is but a passenger on board a ship where his dignity gives him no authority over the sailors. The liberty of the humblest is respected when he wants to choose a partner for this life, how much more should it be so where a heavenly and spiritual union is concerned! He writes with inexorable logic, with all the fire of an ardent mind awoke to the havoc which "The Bloody Tenet" had been working for ages, and with all the indignation of an iron will reacting against the cruel yoke under which he had been bleeding. We have bought the truth dearly, he exclaims, let

us not part with one grain of it for the whole world ; no, not to save the souls of others, or our own.

A great many superficial people on the continent believe that religious liberty dates from Voltaire ; indeed, the idea has become one of the traditional articles in the strange mixed creed of vulgar continental infidelity ; but between the liberalism of Williams and that of Voltaire, there is not only the interval of some six score years, but the moral difference between a system founded upon respect for the exclusive rights of God over the conscience, and one founded upon contempt for all religious convictions. The sphere that the one would protect from intrusion because he holds it sacred, the other would leave undisturbed because he holds it to be contemptible. The man who only cares about the right to be as irreligious as he pleases, may safely trust his liberty to the school of Voltaire ; but the liberty of the man who wants to serve his God would be precarious indeed in a society pervaded by its spirit. Roger Williams, writes M. Astié, is no theologian in despair, unwillingly giving up the attempt to impose an official church upon a recalcitrant people. He lived in an age of faith ; his adversaries were Christians, and it was his own piety that actuated him in his unconquerable aversion to all forms of intolerance.

Among ourselves it is pretty generally believed that Maryland had the honour of inaugurating the era of religious liberty. The idea has been the more widely propagated that it is supported by the high authority of Bancroft, who takes occasion from it to indulge in his somewhat declamatory tendency. Whether this be simple carelessness on the part of the most voluminous and accredited of American historians, or whether his unitarianism led him to be Unconsciously unjust towards the orthodox Protestant founders of Rhode Island, we know not ; but in either case Profesoor Astié satisfactorily proves that Bancroft is wrong. As a simple matter of chronology the social contract drawn up at Providence, preceded by thirteen years the act of toleration passed in the legislature of Maryland, A.D. 1649. It is probable, however, that toleration was practised in Maryland, to some extent, before it was officially proclaimed, and the difference *in kind* between the religious liberty established in the northern colony, and that of the southern, is much more important and decisive than the mere question of dates. Liberty of conscience was absolute in Rhode Island, partial in Maryland ; it was founded upon principle in the one ; it was an expedient in the other. Roger Williams advisedly opened

"an asylum for all sorts of consciences," that of the Turk, Jew, or Atheist, as well as that of the isolated and suspected Christian; and he actually did protect the religious liberty of the Pagan Indians, as well as that of the Antinomians and Quakers, with some inconvenience and danger to himself and his people. Lord Baltimore's colony, on the other hand, only opened itself to orthodox Protestants and Roman Catholics. This same session of 1649 decreed the punishment of death for disbelievers in the Holy Trinity, so that Bancroft himself would not have been tolerated in Maryland. Idolatry, sacrilege, and witchcraft were also capital crimes. Even those who should eat meat in Lent, or upon other days when fasting was enjoined by the laws of England at that time, were fined. The preamble of the Maryland Act of Toleration does not profess to proceed upon any higher principle than the wish to maintain quietness and concord among the inhabitants, and the real purpose of its framers was to secure toleration for themselves, by granting it to all Protestant sects who might otherwise be powerful enough to hurt them.

It is astonishing how slow our ancestors were to discover that men belong to God and not to their fellows, and that we have no right to judge the servant of another. No sooner had the English Presbyterians escaped from the fangs of the Courts of the Star Chamber and High Commission, than they prohibited the use of the Book of Common Prayer, even in private families, under a penalty of £5 for a first offence, £10 for the second, and one year's imprisonment for the third. In February, 1646, the Scottish Parliament solemnly warned the English not to "tolerate any sects or schisms contrary to our solemn league and covenant," and at the same time, in an address to the people, they called liberty of conscience the nourishment of all heresies. Whatever the Parliament of England may determine, they continue, "we are resolved to live and die for the glory of God in the preservation of the truth." The ministers of Zion College memorialised the Westminster Assembly against that great Diana of toleration. "Not that we can harbour the least jealousy of your zeal, fidelity, and industry in the opposing and extirpating of such a root of all gall and bitterness as toleration is and will be, both in present and future ages!" That very Prynne, who had lost his own ears by the hangman's knife, as a practical illustration of the use of Peter's sword—Prynne himself maintained that the Independents were bound to yield to the authority of Parliament in religious matters. Another writer complained that after the demon of episcopacy had been cast

out, seven worse had entered in, under pretence that men were to be let serve God according to their consciences. The elders and ministers of London, in a provincial synod, represented the doctrine of toleration as contrary to godliness, opening a door to libertinism and profaneness, such, in short, that it should be rejected as soul poison ; and an equivalent protest was signed by 360 ministers of Lancashire, Gloucestershire, Devonshire, and Somersetshire.

While well-meaning men in England were betraying all this blindness ; while the grasp of despotism was growing tighter round the throat of French Protestantism ; and Holland was torn by religious factions ; and Germany lay exhausted and bleeding under the horrors of the Thirty Years' War ;—it was then that one pure ray of religious liberty shone through the darkness from beyond the western waves, like a segment of the sun's disk appearing above the horizon after the long night of a polar winter. Virginia and Maryland did but continue European society, says M. Astié ; it was in New England that the first pulses of a new world began to beat. Rhode Island especially, that nest of dangerous innovators and heretics, which all its neighbours did their utmost to stifle in its cradle, was a society altogether unprecedented. The whole religious history of America, and part of that of Europe, is the record of the gradual triumph of its spirit over that of the theocracy.

Rhode Island did not the less give its founder a great deal of trouble. Like the Cave of Adullam, it was a refuge for all manner of fanatics, malcontents, and undisciplined characters, the scum of the neighbouring colonies. He had repeatedly to leave them to themselves, and betake himself once more to trade for beaver skins, and plough a clearing in the wilds ; then, in their distress, they would call for him again. During a second visit to London for their interests, he was introduced by Sir Harry Vane to Cromwell and Milton, and saw them frequently.

During these controversies the number of inhabitants was increasing ; the forests were being felled ; the cottages of the white man were dotting many a clearing ; the small birds and the honey bee were accompanying him like dependants, as the Indians observed, in his advance upon the woods. In 1642, Massachusetts contained 15,000 inhabitants, Connecticut 3,000, Newhaven 2,500, Rhode Island some hundreds ; and there were eighty ministers, of whom forty had graduated in the English universities. In 1649, Virginia had 15,000 white inhabitants, with 300 negroes ; the exact population of

Maryland is not known ; that of Massachusetts at the same period was over 21,000, that of the whole of New England about 35,000. These were the ancestors of the present New Englanders, and of one-fourth of the present population of the United States ; for at the close of the civil war, emigration to America stopped, because men hoped in the establishment of liberty in England ; after the Restoration, the state of things was too precarious to tempt any one, except the Quakers, who had every man's hand lifted up against them, so that emigration did not fairly begin again on a large scale until that of the last forty or fifty years.

By the middle of the seventeenth century, the shipping of New England was considerable in proportion to the number of the inhabitants, consisting essentially of vessels of from one to four hundred tons, built in the colony itself. The South had no ships, and its tobacco was exported in Northern bottoms. The New Englanders carried corn to Virginia, the West Indies, and the Summer Islands ; fish to Portugal, Spain, and Madeira ; returning with cargoes of wine, fruit and oil. They had begun to spin wool, cotton, and linen, and to manufacture glass. Harvard College was founded as early as 1639, and was soon after provided with a printing press. In 1647, an Act was passed rendering primary schools gratuitous, and a certain amount of primary instruction obligatory throughout Massachusetts. Every township containing fifty households was to have its schoolmaster ; every township with a hundred households its Latin grammar school. And this daring innovation, upon which no other country in the world had then ventured, was not deemed too great a strain upon the resources of a feeble colony scattered through the forest, and ever threatened by the tomahawks of the savages. Professor Astié elsewhere reminds us that the modern State of Rhode Island contains 150,000 inhabitants, and has a revenue of 120,000 dollars, of which 85,000 are devoted to education !

The self-government and practical independence of the colonies were much greater in their infancy than is commonly supposed ; greater indeed by far than they enjoyed during the 115 years that intervened between the Restoration of the Stuarts and the War of Independence. The council-general decided as a sovereign power questions of peace and war with the Indians, as well as those of internal policy, and it acted as a final court of appeal in judicial matters. So early as 1631, we hear of a man's being put in irons for threatening to appeal to England. They characterised their collective interests by the terms *jurisdiction, body politic, and republic,*

indifferently. In 1634-5, Charles I. stopped the departure of ten vessels about to leave England with emigrants, and expressed his determination to revoke the charter of Massachusetts, to establish a commission for the government of the colonies, with Archbishop Laud for its president, and to allow no emigrants to proceed without taking the oath of allegiance, and promising to conform to the discipline of the Church of England. When this startling intelligence reached Boston, the Puritans raised fortifications and prepared to sell their liberty as dearly as they could ; but Charles' difficulties at home hindered him from coming to extremities, and the storm blew over for a time,

It was at this critical period that Lord Brook, Lord Saye and Sele, and some other persons of rank, proposed to emigrate, if the New Englanders would agree to recognise them and their descendants as an official aristocracy, constituting an upper house of legislators. No formal answer was made to this proposal for two years, and then it was to the effect that the colonists would look upon it as an especial favour of Providence, if such men found it in their hearts to share their lot in the wilderness ; they might reckon upon being chosen with thankfulness as governors and chief magistrates for their own lives ; but if it did not please God to endow their children with the same qualities, the putting the latter into a position of authority to which God had not called them, would only expose them and the State along with them to reproach and danger.

During the civil war, the sympathies of the North were for the Parliament as decidedly as those of the South were for the King ; but the American Puritans collectively kept aloof from the conflict, and even made their neutrality be respected. Winthrop actually fired upon a parliamentary vessel which was attempting to make a prize of a royalist ship in the port of Boston, and would have sent it to the bottom, if the captain had not desisted ! In the same spirit of cautious independence, they declined sending representatives to the Westminster Assembly, though Cromwell with some peers and many commoners, pressed them to do so, and though the opportunity of defending their views in this ecclesiastical parliament must have been a great temptation. They were afraid that if they took any part in its deliberations they should be considered as bound by its decisions.

The far-seeing prudence with which the settlers avoided committing themselves to anything which might warrant even friends at a distance legislating for them, was soon

justified by events, for in November 1649, the Long Parliament appointed a commission for the government of the American colonies, with powers inconsistent with the rights which the inhabitants had been using, of naming their own magistrates and officers, and of judging in civil and criminal cases without appeal. The American agent in London, Winslow, exerted himself with so much energy and tact, that he succeeded in suspending the effect of this measure until the war with Holland, and the final dissolution of the Parliament made it a dead letter. Even while the matter was yet pending, in 1652, the state of Massachusetts took upon itself to exercise the sovereign prerogative of coining money, and continued to do so for thirty years.

During the war with Holland, Cromwell asked the New Englanders to help him to drive the Dutch from the mouth of the Hudson. Massachusetts received the suggestion coldly, but consented to let the Protector's envoys raise 500 volunteers if they could find them. New Plymouth went so far as to equip a trifling corps at its own expense under Miles Standish. Cromwell sympathised with the principles of these, his half independent subjects; he appreciated them as Christian men and useful citizens, but does not seem to have had the most remote idea of the importance with regard to the future of the position they had been providentially led to occupy, for we find him on two occasions trying to induce them to abandon it. After his pacification of Ireland he wanted them to recross the Atlantic in a body and settle upon confiscated lands; and after his conquest of Jamaica, he made them the most brilliant offers, pressing them to exchange their barren rocks for its teeming soil.

Men so republican in their instincts, and accustomed to be their own masters during twenty years of obscurity, followed by twenty years of civil war and uncertain government in the mother country, must have been little disposed to welcome the news of the Restoration. They made a virtue of necessity, however; and in their somewhat obsequious address to Charles II., represent New England as a poor Mephiboslieth, who, by reason of distance and his own infirmity, came later than his fellows to do homage at his Majesty's feet. They requested withal the royal confirmation of their civil and religious liberties. Charles' minister, Clarendon, answered them at first very graciously, only requiring the extradition of any regicides who might seek refuge among them. This was a practical and immediate difficulty, for the same ship that brought to Boston the news of the Restoration had in-

cluded among its passengers two of the resolute men who had signed the death-warrant of Charles I. When Clarendon's despatch arrived, the fugitives immediately set off, ostensibly for the Dutch settlements, but were really smuggled from one hiding-place to another, with a sort of freemasonry, in which the authorities and the population were accomplices, until they disappeared altogether in some unknown solitude of the forest, where, fifteen years later, at the time of the Indian confederacy, headed by the Sachem Philip, the village of Hodley was saved by one of them, Colonel Goffe, in the way which Bridgenorth is made to describe so graphically to Julian Peveril, though Scott was mistaken in confounding the mysterious rescuer of the devoted village with Richard Whalley.

More serious difficulties were at hand. Clarendon and his master looked upon the colonies as (to use the language of a report preserved among the State papers of the time) "already hardened into republics," and they were determined to break up the state of things existing among this remnant of the Puritans. Clarendon did not disdain to prepare the execution of his plans by unworthy contrivances to set the colonies at variance with each other. Massachusetts being the most powerful, he tried to isolate it; Rhode Island received the most liberal charter possible, and certain territories which were contested between it and Massachusetts were adjudged to it; Connecticut was equally favoured at the expense of Massachusetts, and, not only so, but, to the surprise of all parties, the hitherto independent settlement of Newhaven was included in its territory. The artifice had nearly succeeded; the magistrates of Connecticut claimed jurisdiction over Newhaven, and the inhabitants of the latter refused to submit to them. After a time, however, counsels of conciliation prevailed; compromises were entered into with respect to the contested territories; Connecticut gave up the idea of extending her sceptre over an unwilling sister, and the latter, in turn, consented to their union.

The great thing that weakened the hands of the Puritans, in the approaching conflict with the crown, was their conscientious intolerance, and the cruelty it had led them to exhibit towards the Quakers. The captains of ships who brought any of the unfortunate followers of Fox into either Connecticut or Massachusetts were fined; so were all persons who received them under their roofs. They were themselves whipped and kept in prison until they could be sent back, and the Quaker who reappeared after this had an ear cut off.

Persecution exercises a sort of fascination over minds in a state of feverish excitement, and all these severities only made the Quakers the more anxious to find their way into New England ; at last, Massachusetts in an evil hour decreed the punishment of death against such of the sectaries as should venture back after having been sent away. This was in 1559 ; the inconsiderate law that the crown of martyrdom should be had for the asking, of course, increased the demand. Enthusiasts of both sexes immediately supposed themselves commissioned of heaven to go and give their testimony in Massachusetts, even unto blood, and several were hung in the course of the year, until the population, horror-struck, repealed the law. The perseverance of the victims had tired out that of the persecutors, without, alas, bringing them as yet to see the falsehood of the principle on which they had acted. The Quakers then revelled in their victory ; one of them entered the principal church of Boston, at the hour of divine service, and broke two bottles against each other, to show how the Lord was about to dash this people to pieces. Women entered other congregations in the costume of Paradise, as a sign and a wonder to an evil generation. As M. Astié observes with truth, these extravagances were no justification of the intolerance of the Puritans, for they followed it, and were produced by it. The mistaken zeal that had spent itself in cruelty made itself powerless to obtain common decency.

One sometimes wonders at the tone approaching to servility with which good men, persecuted for conscience' sake, in Europe, during the seventeenth century, addressed the powers that oppose them. They did not seem to feel the indignation that to us would appear legitimate, and even becoming. The reason, doubtless, is that they did not themselves understand the exclusive claims of God over the obedience of His creatures. They knew how to endure all extremities for their own convictions, but did not so generalise the principle as to be ready to respect the convictions of others, if they had been masters. They acquiesced in the abstract doctrine of persecution, though they believed it was misapplied in their own case ; just as Servetus acquiesced in the capital punishment of heretics, and would have tied Calvin to the stake if he had had the power. The slowness with which our poor human nature learns to detect the evils and the lies to which it has accustomed itself would be absolutely incredible if the facts that vouch for it were not before us ; there existed once in Brazil, and there still exist in the

Indian Archipelago, tribes of hereditary slaves, to whom it seems the most natural thing in the world that they should be sooner or later fattened, killed, and eaten by their masters. Such a fate is, in their eyes, one of the inevitable ills of life, but contains nothing to shock the feelings.

The Quakers were persecuted in Old as well as in New England, yet it was by an intervention in their favour, that Charles II. began his campaign against the institutions of his transatlantic subjects. He signified to the good people of Massachusetts his pleasure that all sentences of corporal punishment against Quakers should be suspended, and the culprits sent to be tried in England. He next sent a most graciously worded answer to the address of the colony, but which ended by expressing his wish that the oath of allegiance to his person should be universally taken, that justice should henceforth be administered in his name, that the services of the Church of England should be tolerated, that Episcopilians should enjoy the same civil and political rights as the other inhabitants, that all persons of fairly moral conduct should be allowed to take the communion, that the children of all inhabitants, and not merely those of church members, should be baptized, and that no religious test, except faith in the Holy Trinity, should be required in order to enjoy political rights. In short, the all-important part of his majesty's message was at the end, as is said to be the case with ladies' letters.

The Puritans were in consternation, for this was at a time of violent reaction in England, and the very year of that fatal St. Bartholomew's Day, on which 2,000 ministers were driven from their posts. They complied at once with the comparatively unimportant order to administer justice in the King's name, and sought to gain time without distinctly refusing all the rest. It was then that the common danger brought about that spirit of mutual forbearance as to contested points which has been already mentioned. Things seemed to have reached a crisis in 1664, when four ships of war appeared before Boston, carrying 400 soldiers, in addition to their crews, and four royal commissioners. The armed force was intended to act against the Dutch, and, at the same time, indirectly to intimidate the colonists. It was too weak, however, to effect the latter object; the magistrates of Boston received the royal commissioners with every demonstration of respect, and offered the soldiers refreshments, but insisted that they should come on shore unarmed, and not too many at a time. The invasion of the Dutch

settlement was altogether successful; many of the inhabitants were English, and the rest disaffected by the arbitrary rule and exactions of the Governor Stuyvesant, who scrupulously followed the injunctions he had received, not to pay any attention to the wishes of the colonists, and "not to encourage the visionary dream that taxes should only be levied upon them with their own consent," so the settlement on the Hudson fell almost without a blow; it was conceded by Charles to his brother, and New Amsterdam became New York. The Dutch lost their possessions in the New World by committing the fault which was to cost England dearer still, 112 years later.

The royal commissioners meantime exhibited to the Governor of Massachusetts credentials, which conferred upon them an authority almost like that of prefects come to govern a conquered province. The General Assembly of the province raised 200 men to co-operate in the expedition against the Dutch; and they so far yielded to the King's demands as to substitute for church membership, as a condition of political rights, the possession of a certificate of orthodoxy and moral character given by the parish minister, together with a low property qualification. Further than this, they said they could not go; their liberties and convictions were dearer to them than life; and if his majesty drove them to this extremity, he must either crush them where they were, or let them emigrate in a body elsewhere. In the smaller colonies the commissioners asked less, and, for various local reasons, obtained more, but nowhere did they find the population disposed to let itself and its ways be transformed altogether according to the King's pleasure. They had received secret instructions to present their demands gradually, reserving for the last the King's wish that he and not the people should have the nomination of the governors and commanders of the militia; but to this article they never came, the authorities refused to allow them to hear appeals on cases which had been already decided by the colonial court of justice, and the commissioners left Boston, in May, 1665, with the threat that his majesty had the power to make himself obeyed. For the present, the menace came to nothing; the ship containing the commissioner deputed to England by his colleagues was taken by the Dutch, and his papers destroyed; before the loss could be supplied, Clarendon was disgraced, and the attention of Government was diverted by a war with France.

New England was left undisturbed for several years, and her children would have continued to multiply in peace and prosperity much longer, but for the ungenerous spirit of com-

mercial rivalry which began to grow up in the mother country. The navigation laws had never been willingly or punctually observed by the colonists, and for this reason, towards the year 1680, men of all parties in England were desirous to reduce them to a state of greater dependence. One Randolph, an old enemy of the Americans, was sent from England to Boston as custom-house officer and inspector, empowered to secure the observance of the Act. He was soon assailed by so many suits for damages on account of cargoes seized, that he had to make his escape back to England. Charles II. thereupon announced his attention of modifying the charter of Massachusetts, and required the colony to send agents to London with full powers to treat and conclude upon the matter; agents were sent, but, of course, with powers that were not sufficient in the King's eyes, since they were instructed not to consent to any essential change.

And now followed a time of anxious discussion in every household, as well as in the councils of the colony. These were the evil days in which the love of freedom seemed to have been driven from the breasts of Englishmen. The very day on which the blood of Russell and Sidney flowed upon the scaffold, was chosen by the University of Oxford to issue its grave declaration that absolute, unconditional submission to the will of the monarch in all things was the law of the Church; and the nation seemed practically to acquiesce in the doctrine. London itself had lost its charter; could Massachusetts hope to retain hers?

The men of that generation were not prepared to meet this question in the same fear of God, and therefore with the same heroic spirit as their fathers. America participated largely in the universal declension of religious life. If her privileges were great, there was also this peculiar disadvantage, that her theocratic institutions had been left free scope to produce their inherent disastrous effects. Men capable of being good and devoted citizens, but who had not passed through the religious experiences which entitled them to become members of the churches, or who shrank from professing to have done so, felt that they were treated with injustice when they were refused the exercise of civic rights. They were exposed to the censures of the Church, and the severity of the State, when they violated in any respect the Puritan code of morals and ascetic life, and they enjoyed no corresponding privilege, except that of exemption from the inconveniences and responsibilities of government. No system could be devised more proper to give men a dislike to

religion, and to depopularise the institutions bound up with it. On the other hand, the churches, conscious of this growing discontent, and seeing their members were every year fewer in proportion to the population at large, were naturally tempted to lower the standard of admission, doing so at first gradually and unconsciously, and afterwards in an accelerated ratio, until, towards the close of the seventeenth century, membership generally involved only a very partial profession of taking religion in earnest, and, in some congregations, involved none at all. The very measures by which the Puritans had attempted to render their ecclesiastical system perpetual had helped to bring about its transformation. The edifice which Charles II. and an ultra-tory ministry were about to attack from without, was already weakened within, and its foundations sinking. Professor Astié carefully traces out the successive phases of the internal revolution which was to leave the descendants of the Brownists disarmed before their hereditary foe ; and, as he has Baptist views, he believes that the changes of opinion and practice which attended the inward declension of religious life, followed in strict logical sequence from what was technically called the *half-way covenant*, or the theory that persons baptised in their infancy were really, though incompletely, members of the churches, and amenable to their discipline.

Religious men in America were loud and incessant in their lamentations over the degeneracy of the age. Pulpit and political tribune rang with the same melancholy strains, disagreeably like those with which Papal encyclicals have been wearying the world for the last eighty years. It is the fate of all theocrats, sooner or later, to find themselves engaged in a bootless struggle to hinder society from breaking loose, and it is their misfortune that they can only resort in their despair to stronger doses of the drug which their patient is already disposed to throw out of the window. So new laws were promulgated against idolaters, blasphemers, heretics, and obstinate schismatics ; whosoever should question the canonicity or the inspiration of any book in the Bible was to be imprisoned for six months, in the first instance, then kept in prison until he should give security for future better behaviour, and readier obedience ; in case of relapse the pillory and the whip were to be employed, or the red-hot iron piercing the blasphemer's tongue. Fasts were proclaimed, and their observation imposed by authority. The deplorable witch-panic which occurred a few years later was a dark and horrible revelation of the length to which even good men

can go when they believe the cause of truth to be well nigh lost in the world. They mistook a wild excitement for a revival of the religious zeal of their fathers, and kept artificially working upon their own fears and those of the public until they became blind and cruel for very faintness of heart.

In November, 1684, the English judges pronounced the charter of Massachusetts null and void, and there remained no legal obstacle to the arbitrary power of the court. The intentions of Charles II. were but too clearly indicated by the choice he made of a governor for the provinces which thus lay at his mercy; it was no other than Colonel Kirke, whose name, however, had not yet attained the infamous celebrity which it was to acquire after Monmouth's rebellion. The death of the King saved the devoted colony from becoming the arena in which a monster like Kirke was to exhibit his devotion to the altar and the throne, and it even enjoyed a respite of eighteen months before the new *régime* was actually introduced. At last, in 1686, James II. sent one Andros to New England, with the title of Governor-General, and with powers practically unlimited. Men will not fight against all odds for mere temporal interests, as they will do from motives of conscience, and so completely were the sons of the Puritans convinced of the uselessness of resistance, that with a frigate and two companies of infantry, Andros was able to take peaceable possession of Boston, and give law to the whole country. He imposed the most oppressive taxes at will, prohibited all printing, ordered that no man should leave the colonies without an express permission, laughed at the simpletons who claimed the privileges of the *habeas corpus* and the *magna charta*, called upon all owners of property to take out new concessions for their lands, and to pay for them at an exorbitant rate; told the colonists who complained in plain terms, "It is not his majesty's interest that you should prosper;" and took forcible possession of one of the churches of Boston for the celebration of the rites of the Church of England.

The poor New Englanders seem to have clung to their charters as if the material roll of parchment itself was a sort of talisman. When Andros went in person to require the surrender of that of Connecticut, anxious groups of rustic legislators lingered with vain protestations around the table where the precious document lay—suddenly the lights were put out, there was, of course, a little moment of confusion before they could be re-kindled, and then the charter was gone. An unknown hand had mysteriously conveyed it away. The hollow of an aged oak, whose giant arms had sheltered

many a generation of Indian hunters before the pale faces ever came across the great salt lake, received the sacred deposit, nor was it withdrawn from its hiding-place until many years had elapsed, and these evil times had been long counted among the things of the past.

While this work of oppression was going on, the creation of the states which were one day to form the great Federal Republic pursued its course. The foundations of South Carolina had been laid as early as 1665, by adventurers from Barbadoes. About the same period, or a little later, some Puritan and Quaker emigrants became the nucleus of an English population in North Carolina. Both these territories, together with the whole southern half of the present United States, were included in the vast concession, reaching to the Pacific, which Charles II. made in 1665, to Lords Clarendon and Shaftesbury, the Duke of Albemarle, and five other proprietors. These noblemen intended to found a colony upon an imperial scale, and from which all democratic tendencies should be for ever excluded. To do so the more effectually, they called the wisdom of Locke to their aid, and, in 1669, Shaftesbury and his philosophic friend produced the famous constitution called "the great model." This incubation may, without injustice, be called an attempt to saddle upon the New World the most antiquated institutions of both Europe and Asia. It divided the soil into inalienable fiefs of 3,000 acres each. It provided for a hierarchy of dignitaries and governing classes, numerous and complicated as the cycles and epicycles and deferents of the Ptolemaic astronomy. Palatine and admiral, chamberlain and chancellor, constable and grand-master, counts, caciques and barons! It was not only a feudal system with the slavery of the blacks at its basis, but actually a return to the castes of India, for the children and descendants of the "leet-men" or hereditary tenants, tied down to the soil like serfs, though whites, were condemned without exception, and without any choice of their own, to follow the calling of their fathers.

This impracticable piece of pedantry was received with admiration in England, and Locke, who had the honour of being the first "landgrave," remained to the last proud of his work; but the men for whom it was made, hyperspiritual Quakers, sturdy, self-relying, self-governing Puritans, keen and bold adventurers, proved incapable of appreciating its merits. For the space of twenty years and more, the proprietors entertained the hope of setting the cumbrous machine in motion, and made occasional efforts to do so, but as often

it stuck fast, like the Lord Mayor's gilded coach, without horses to draw it, or a road to run upon, in the midst of the dismal swamp.

William Penn's settlement was made with a higher purpose, and with better success. He obtained, in 1681, a concession of the territory lying between the 39th and 42nd degrees of north latitude, and extending five degrees westward, as a set-off against £16,000 which the British Government owed him, and would probably never have paid. The usual feudal prerogatives and powers were formally conferred upon him, but he only availed himself of them to secure for his people the right to govern themselves, not wishing, as he told them, to reserve for himself or his successors any power to do harm. Pennsylvania observed treaties, and administered justice without oaths, conferred the suffrage upon all who were called upon to bear their share of the public burdens, made all Christians eligible to all offices of power and trust, treated marriage as a civil contract, abolished the penalty of death except for murder, discouraged prosecution for witchcraft, and made working at useful occupations a part of prison discipline. Never before or since was a bad debt applied to so good a use. The confidence inspired by the character and the institutions of "the king of the Quakers" was so great, that emigrants flocked in from the banks of the Rhine, as well as from various parts of the British Isles; and during the first three years of its existence, Philadelphia made as much progress as New York had done in fifty.

So far as his personal interests were concerned, Penn, like all colony founders, reaped nothing from the enterprise but disappointment and pecuniary difficulties; but he died with the consciousness of having accomplished a great and good work. His co-religionists retained their political predominance in the colony for three-quarters of a century, until the necessities of the fourth colonial war threw the helm into the hands of men whose principles allowed them to make war. The terrible struggle which has just concluded was, however, destined to witness, among other marvels, whole regiments of fighting Quakers.

The messenger who brought to Boston the news of the landing of William of Orange in England, was thrown into prison, but the intelligence was like a spark upon a train of powder; the militia rose in arms, and, in a few days, Governor Andros, with his principal friends and creatures, occupied the messenger's place. Even in the South, the inhabitants declared themselves for the revolution, without waiting to learn

whether it had been successful in the mother country or not. An ultra-Protestant party seized the reins of government in Maryland, and the people of South Carolina got rid of the governor imposed upon them by the proprietary lords, and of "the great model" along with him; or, rather, of the last annoyances caused by vain attempts to put it in force.

Had the ruling classes in England been either generous or wise, the year 1688 would have been the introduction to a state of harmony and mutual confidence between the old country and the colonies, such as might have remained for ever undisturbed. Unfortunately, it was not so, and the joy with which the revolution had been hailed by the Americans was soon damped. The mother country wished for liberty and prosperity for herself, but not for her distant children. Every successive parliament showed itself jealous of the degree of self-government proposed by the colonists, tenacious of its power over them, and disposed to carry out in detail all the measures that a narrow spirit of commercial rivalry could dictate. That false and disastrous policy of protecting the supposed interests of the centre of the empire at the expense of the extremities drove Scotland for a time into a state of frenzy; its results still pursue us in Ireland—the Nemesis of former wrongs, which no present liberality can appease; and in America it gradually created the feeling of alienation, which was to issue in a forcible separation, so humbling to our pride, and so seriously affecting our greatness. The charter of Massachusetts was renewed with many restrictions; the navigation laws remained a standing cause of irritation; the extension of the Habeas Corpus Act to New England was refused; the press was handcuffed; various particular manufactures, among others that of woollen cloths, were prohibited, because they seemed to be succeeding too well.

The wars of William III., and that of the Spanish succession, involved the English settlements in wasting and exasperating, but indecisive, hostilities with their French neighbours in Canada and Acadia. Upon the failure of an attack made by the New Englanders upon Quebec, in 1690, Louis XIV. had a medal struck with an inscription not very happy in a prophetic point of view, *Francia in novo orbe victrix!* The Jesuits on the French side, the Huguenots on the English, introduced into these struggles the bitterness and cruelty attending wars of religion. The English colonists complained that they were not allowed to govern themselves,

and yet were left to provide for their own defence. They were not allowed to enter into formal confederation with each other, and the chief burden of these wars was not the less thrown upon them ; and, while their outlying settlements were exposed to the cruelty of the enemy, their efforts for either aggression or defence were sure to be paralysed at the critical moment by the absence, or else by the misdirection, of the forces promised by the home government.

It was just at the close of the seventeenth and beginning of the eighteenth centuries, during the short interval between those two first wars, that the French government seems to have first conceived the plan of establishing an immense and exclusively Romanist empire over the greater part of the American continent, from the Alleghanies to the Pacific, from the Gulf of St. Lawrence to that of Mexico ; an unbroken chain of forts was to connect Canada and Louisiana, and to confine the English to the Atlantic sea-board. The red skins were naturally disposed to take up the hatchet in favour of the nation which had fewest colonists to disquiet them, and encroach upon their hunting-grounds ; and it was not until after sixty additional years of rivalry, and latent and open hostility, that the French plan was finally defeated, not so much by the victorious arms of Wolfe, as by the irresistible expansion of the English population. The two greatest prizes, for which England and France ever contended, were the possession of the North American continent and Hindustan ; both were decided by the sharp and decisive struggles of 1756—1763 ; in both cases we owed our victory in a great measure to the genius and vigour of the elder Pitt, and in both cases the ideas of empire, realised by English arms, had originated in French heads.

During the third colonial war the New Englanders formed the hardy project of attacking the important fortress of Louisburg, in the island of Cape Breton, the centre from which issued most of the expeditions that disquieted them. In the spring of 1745 they actually did reduce it, with their own unassisted forces ; but a shade of suspicion and dissatisfaction seemed to cloud the matronly brow of the mother-country, qualifying in some degree the admiration she bestowed upon the enterprising spirit of her offspring ; and at the peace of Aix-la-Chapelle, the latter had the mortification of seeing their conquest ceded back to France.

Thus one generation after another passed away ; the Americans were growing “ while men slept ;” they had lost the relative freedom they enjoyed under the Stuarts, but never

ceased to protest against the change, and never neglected an opportunity of reasserting their liberties piecemeal. In a religious point of view they had sunk into a state of total indifference ; but from this they were roused by the great revival beginning under the ministry of Jonathan Edwards, in 1735, and thus preceding by a few years the awakening brought about by Wesley in England. This great religious movement, like every similar one, was attended by many characteristics calculated to discredit it ; there were exaggerations and extravagances of all sorts. A zealous and eccentric preacher, James Davenport, believed himself bound by the letter of the Scripture to carry no money with him in his journeys, nor changes of raiment, nor shoes, though he indulged with a safe conscience in the luxury of a second pair of boots. There were phenomena of mere physical excitement, like those which have been witnessed in our own times ; there was a very general spirit of uncharitable and superficial judgment abroad, especially among the young and the naturally presumptuous. But these aberrations and excrescences did not destroy the fundamental character of the work ; on the whole it was a people touched to the heart by the importance of eternal things. The depth and universality of the feeling may be estimated by the simple fact, that the legislature of Rhode Island once suspended its sittings in order that the members might attend in a body upon the preaching of Whitefield.

The majority of the clergy were at first opposed to the revival, and in Connecticut the civil authorities went so far as to punish both lay preachers and such ministers as should preach in the parishes of others, except at their special request. Strangers accused of troubling the public peace by holding religious meetings, were marched out of the state, under custody of the police, like vagabonds. The conviction of the necessity of personal conversion to God, soon made multitudes feel like strangers in churches, which seemed to retain nothing of the spirit of their founders, except the unhappy tradition that a majority, supposing itself alone orthodox, had a right to impose its doctrines and discipline upon the minority ; and when such persons separated from the official churches, they were actually visited with the penalties instituted by their fathers, which had been made with the mistaken idea of protecting the very principles they were now used to crush. Connecticut having retained its charter and penal laws, which had long been a dead letter, the persecution of Dissenters grew so serious, and lasted so long, that committees were

ormed in England for the furtherance of religious liberty in America.

It was the privilege of Jonathan Edwards to put a stop both to religious schisms, and to the intolerance that aggravated them, by the timely publication of views equivalent in substance to those of Roger Williams, with the corollaries and supplements of which a hundred years' additional experience had shown the necessity. He advocated the most complete toleration, so far as the State was concerned, accompanied on the part of the churches by precautions, at once against the chimerical pursuit of pure communities, consisting of the regenerate only, and against the other extreme of formalism, and mere conventional hereditary Christianity. The churches were to renounce all appeals to the secular arm, and all attempts to extend their discipline over non-communicants; and, on the other hand, the local church was no longer to be co-extensive with the congregation: the serious profession of personal religious convictions, accompanied by a life consistent with such a profession, was to be the condition of admission to church membership.

It was in 1749 that Edwards put forth this higher and broader platform, upon which men, hitherto opposed to each other, might meet. He was immediately denounced as latitudinarian by some, as narrow and sectarian by others, as opening a door to all forms of impiety by theocrats of the old school; he was dismissed from his pastoral charge by his own congregation, only about twenty votes out of more than two hundred being registered in his favour; and yet he lived to see his system generally adopted by the orthodox churches of New England, and in a fair way of being so from one end of the colonies to the other. The communities which finally rejected it were only those in which a so-called "moderatism" prevailed altogether, which were indifferent to the doctrine of the reformation, as well as to practical religious life, and which were soon to become openly Unitarian; for the revival, as Professor Astié says, at once hastened the development of Unitarianism, where it already existed in germ, and prevented it from spreading more widely and insidiously.

True to the practical conservative tendency of the Anglo-Saxon mind, that loves to feel its way from step to step, the Americans were slow in adopting the separation of Church and State as a theory. They retained for a long time a mixed system of toleration for all churches, with State support for one; the traditions of each State determining which was to be the system favoured in it. Then came a phase in which

householders were bound to contribute to the support of some church or other, but allowed to make their own choice individually of the community which was to receive their share of the ecclesiastical tax. Finally, orthodox Christians discovered that they were giving a State premium to heterodox communities whose supporters would not have had zeal enough to sustain them otherwise, and the system was discontinued. This last step was not taken until 1833 in Massachusetts, where the theocracy had been so firmly rooted of old, and Unitarianism of late.

"It does not appear," writes M. Astié, "that the great revival excited any direct and special influence upon the War of Independence, which was to break out a few years later. We have already had occasion to see that the causes which could not fail to bring about a rupture with the mother-country, were older and more general. It is incontestable, however, that the re-awakening of attention to those religious truths which, in the Puritans' eyes, lay at the foundation of their liberties, contributed sensibly to nerve the national mind for the crisis which was about to put its best energies to the proof. It was not in vain that men resumed the habit of discussing principles, and of defending what they esteemed to be right and just with the perseverance and tenacity which readily result from strong religious convictions. It must be remembered that the generation which, in its spring-time, witnessed the happy days of the revival, was the same that in its maturity began the revolutionary war. The blessing invoked by Whitefield on the flags of the troops, setting out on the Newfoundland expedition, has already taught us that it was not exactly a Quaker piety he sought to propagate. The taking of Louisburg, the news of which filled Europe with surprise and admiration, was due to Puritan militia, commanded by leaders who had been under the marked influence of the religious movement."

"While the fresh tide of religious life, which was more or less felt throughout all the country, made men more ready and energetic defenders of violated right, it was at the same time a mighty preservation against the demoralising influences of war. It was yet more than this. America was about to be exposed to the assaults of unbelief. On the one hand the political writings of Thomas Paine, resting as they do on bases subversive of all religion, were soon to become popular; on the other, the American troops were about to find themselves in daily and familiar intercourse with their faithful allies—French soldiers imbued with all the principles

of the eighteenth century. No man who believes in the preponderating power of religious principles, will have any difficulty in admitting that, thanks to the revival, great evils were avoided. Even if it had effected nothing more than the negative result of hindering American civilisation from being transformed by the infidelity that threatened it, its place in history would still be of immense importance."

However, the fourth colonial war, or final conflict of the French and English races, was to intervene before the still longer and fiercer struggle for independence. The question, which of the two rival races, religions and languages, was to preponderate? had to be decided, as the inevitable preface to that other question now looming in the distance—what was to be the political and social organisation of the victorious race?

One follows with a melancholy interest the gradual increase in the numbers of the armies that meet for mutual slaughter in the forests of the New World. Leaving out of view the horrible hecatombs of human victims, whose blood inundated the temples of Mexico, and the unrecorded catastrophes that filled the continent with great mounds, sepulchres of whole populations, without historian or epitaph, confining ourselves to the vicissitudes of our own race, we see them settling few and weak upon a soil which they believed to be virgin; but necessity compelled them from the first to carry instruments of death along with them into the very house of God, and then, in proportion as they spread abroad upon the face of the continent, they fill it with the bodies of men slain by their brothers' hands. The fatal law, now a necessity and now an appetite for carnage, keeps pace with their own increase. The half company of quaint and respectable old Miles Standish is succeeded by hundreds, and these by the thousands who fell with Braddock, and at Fort William Henry, and at Quebec. The War of Independence saw its tens of thousands marshalled in hostile array; and, finally, in the terrific struggle which has just concluded, on the very ground where Washington and Cornwallis manœuvred their comparatively manageable armies, hundreds of thousands met for a strife deadlier yet in proportion to their numbers!

In 1755, on the eve of the last colonial war, Hildreth reckons the white population of British America at 1,193,000 souls, and the negroes at 293,000. When the smoke of the battle of Quebec had cleared away, and Wolfe and Montcalm lay beside each other on the field of their common fame, the conquest of Canada and Cape Breton had cost the English

colonies 30,000 men, fallen by the sword, or by disease, and sixteen millions of dollars, of which the mother-country only repaid five. New England had distinguished itself particularly; Massachusetts had always kept up from four to seven thousand men in the field, without reckoning the recruits with which it had furnished the regular army; and it had expended two millions and a half of dollars without having had recourse to paper money. Connecticut had spent two millions, New York one. The Southern colonies had also contracted debts for the common cause, though less considerable. And while their public spirit and self-devotion thus raised the colonies in their own estimation, and in that of the world, they had also silently recovered much of their long-suspended right to self-government. The British Parliament, in order to induce them to make these sacrifices, had been obliged to increase the prerogatives of the Colonial Assemblies at the expense of those of the governors named by the Crown. The Republic was already, by at least three-quarters, in existence, says M. Astié; all that remained to be done was to cut asunder the external tie that bound to the mother-country its robust and ambitious offspring. So clearly was this understood by the sharp-sighted Voltaire, that he received the news of the defeat of his countrymen at Quebec with triumph; he looked upon it as a step towards the emancipation of America, and therefore towards the victory of liberty over despotism in France, and he actually celebrated it by a great banquet in his mansion at Fervex.

Neither George III., nor his ministers, nor even the people of England, were so far-sighted as the sagacious Frenchman. The colonies had been jealous of their liberties from the very first; their aspirations had been irritated and intensified rather than damped by the difficulties experienced in realizing, or maintaining, or recovering them; a long and successful struggle had just taught them their own power, had accustomed them to military and financial operations on a large scale, had convinced them that success waits upon union, firmness, and perseverance; and this was the conjuncture chosen by an obstinate and narrow-minded king, with a weak and subservient ministry, to tax them for the first time, and that for the maintenance among them of a standing army which had now no longer any object except the securing their own enforced submission! The nation generally participated in this folly and injustice to so great an extent, that Franklin could write in 1769 with some little exaggeration, that there was not a man in England who did not consider himself as a

fraction of a sovereign called to reign over "our American subjects." There were, indeed, noble exceptions. Pitt, Burke, and Fox, all three, applauded the resistance of the Americans, and asserted that if they consented to be reduced to slavery, they would next be used to help to reduce the mother-country to the same state. When Colonel Barre, who had served in America, heard a minister in the debate, in the British Parliament, on the Stamp Act, stigmatise the colonists as ungrateful to the country which had planted, cherished, and protected them, he broke out into the indignant protest, "They planted by your care? No! your oppression planted them in America. They nourished by your indulgence? They grew up by your neglect of them. They protected by your arms? Those sons of liberty have nobly taken up arms in your defence." Englishmen are too much given to congratulate themselves on the abstinence from all assertion of abstract principles which distinguished the Revolution of 1688; Lord Macaulay, himself, encouraged this our national complacency in the narrowness of our horizon. But in truth the French Revolution did not fail because it was humanitarian, but because it was irreligious. Had our Revolutionists and their successors thought a little more of the rights of man, and not of the rights of Englishmen exclusively, and of the interests of half an island, Ireland would be now a bright jewel in our crown, instead of being our weakness and our shame, and America would be the largest, the most promising, and not the least loyal half of the British Empire.

As might have been expected, the New Englanders were the hope and mainstay of the patriotic party during the War of Independence; they were its soul in the hour of aggression and in that of resistance. They struck the first blow, and they hoped on when the other States had well nigh despaired. They were unanimous, while the South was divided; their regiments were faithful in every extremity when hunger and nakedness drove their comrades to mutiny. The Congress and the Commander-in-Chief reckoned upon them to impose upon themselves every pecuniary sacrifice to the utmost limit of their means. The sons of the Puritans were not, indeed, fighting directly for their religious liberties as their fathers had been ready to do in 1634; but the fathers prized political and civil rights chiefly as the instruments and the bulwarks of a high religious purpose; and this gave to political rights a sacredness and a value in their eyes which no temporal interest could have imparted to them, a sacredness which became traditional, and the children inherited this self-devoting

impassioned love of liberty, even when the motives which first made it such, were no longer directly appealed to. Moreover, the men of 1776, taken in a body, were less estranged from the spirit of their fathers than were the politicians of 1688 from the spirit of the early Puritan champions of liberty. In the first general order issued after the Declaration of Independence, Washington thus expresses himself, "The general hopes and trusts that every officer and man will endeavour to live and act as becomes a Christian soldier, defending the dearest rights and liberties of his country."

We have trespassed but too long upon the reader's patience, and have not left ourselves space to speak of the history of the last eighty years, the part of Professor Astié's work which contained most that was new to us, which we read with most interest, which bears upon the present relations of England with America, and in which we would have been most anxious to borrow the author's own words. We can only refer the reader to the book itself. It must not be supposed either that the sort of gallop we have been taking from Winthrop to Washington is meant for a summary, properly speaking, of a history which it has already taken a powerful lever to compress into a volume and a half. We have but skipped from summit to summit, along the peaks of a mountain chain, of which a more painstaking pencil has delineated the ridges, the slopes, and the surfaces, with equal vigour and accuracy. The author collected his materials for years in America itself; he brought to his task a pen already exercised in various theological and exegetical works, and a mind capable of treating his theme with a mingled sympathy and broad comprehensive philosophy which are seldom exhibited together.

We cannot, indeed, take leave of M. Astié without expressing the wish to see his book appear in English. It would probably prove more suited to the taste of the British public than to that of his own countrymen, intent as he is upon the religious aspect of things and indifferent to military glory. He is, moreover, the most impartial French writer upon matters touching the self-love of his nation that we ever have had occasion to meet with, reminding us of what was once said in the House of Commons about Huguenot exiles, after the revocation of the Edict of Nantes, "Their heart is with France, but their conscience is for England, and all men know that the conscience weighs more with them than even the heart." It is not that the patriotic chord is wanting; one feels it vibrate when he speaks with indignation of Madame de Pompadour and her creatures, at a great crisis, wasting the

resources of France to serve the antipathies of Maria Theresa, and leaving to their fate the poor Canadians who were so gallantly fighting their country's battles. But M. Astié's patriotism is of a kind which would seek for his country real and lasting blessings instead of the tinsel for which she has been too ready to barter her liberties, so that his best aspirations for her are easily to be reconciled with the most sincere sympathy for our Anglo-Saxon institutions, political and religious.

The Americans themselves would have much to learn from the history before us, and, so far as we are acquainted with the literature of the subject, they possess no work treating it with the same breadth within the same volume. *Bancroft's* classical work is readable and interesting, but then it is in several volumes, its digressions on the affairs of Europe are very long, and, as the author is a Unitarian, he can only be expected to see the Puritans from without, from far below, and from a distance. *Hildreth* is more accurate than *Bancroft*, but his history also is in six volumes, and very dry, and he, too, is a Unitarian. *Elliott's* is in two volumes, but it is confined to New England; it is anecdotic and rambling, and it is written from what he calls "*an advanced position*," that is to say, one of utter unbelief and levity. *Palfrey's* comes nearest in tone and in interest to that of Professor Astié, and it is the latest, having appeared in 1860, but it is a history of New England only, and to this three volumes are devoted. Altogether, our cousins have done less in proportion for the history of their own country than for that of Spain and Holland, and, we had almost added, that of the Duchy of Burgundy. M. Astié has supplied a void, and supplied it well.

ART. II.—1. *Annual Reports of the Deputy Keeper of the Public Records.* 1840—1865.

- 2. *The Series of Chronicles and Memorials of Great Britain and Ireland during the Middle Ages.*** Published by the authority of her Majesty's Treasury, under the direction of the Master of the Rolls.
- 3. *The Series of Calendars of State Papers.*** *Ibid.*
- 4. *Handbook to the Public Records.*** By F. S. THOMAS. London: Eyre and Spottiswoode.

THE critical study of our national history, civil, political, and ecclesiastical, is making such giant strides in its development under our very eyes, that not only are our preconceived ideas on many isolated and minor points already entirely revolutionised, but the whole science also, in its wider and more general bearings, is rapidly being presented to us in another and clearer light. Almost up to the present time the only treatises on British History accessible to the great mass of educated people have been framed for the most part on lists of facts and dates, often depending for their claims to authenticity on the bare assertion of an earlier writer. They have contained a substratum of narrative, a paraphrase or a summary, as the case might be, of chronicles, legends, and traditions, of every shade of credibility and authority; and the superstructure of comments and conclusions, the statement of the historian's own opinions and observations, has often from the very vagueness of his subject-matter been characterised and, as it were, coloured by his own individual proclivities. The history taught in all our schools has been derived from text-books that are simply abridgments of all this; and that, as abridgments, have perpetuated all the faults of the larger works as to accuracy in points of fact and detail, without being able to retain their most valuable features, the full expressions of the matured thoughts and opinions of able men. Even for those who professed and really wished to make this science their speciality, and to study it with the utmost regard to carefulness and precision, comparatively little further scope has been afforded. They have been able, it is true, to estimate to some extent the values of the great standard text-books, by comparing them with their original authorities; thus the candidates for honours in the Modern History School at Oxford usually read the Saxon Chronicle and Florence of Worcester, as well as Hallam and Lingard;

but as to the veracity of these originals, they have had no test beyond that afforded by internal evidence. And yet the best of all possible tests, contemporaneous and authoritative records, have been in existence, at all events with regard to by far the greater portion of our history. It would, in any case, appear presumptuous, and indeed idle, to tax such men as the great standard writers mentioned, with want of diligence in research, because they have made little or no use of much of this material ; and in truth they could have known very little either of its value or of its extent, beyond mere conjecture ; since, practically, they could have had scarcely any access whatever to the great mass of it, as will be seen presently. It is only since the laborious work has been attempted and has advanced to a certain amount of completeness, of collecting, cleansing, classifying, and generally rendering accessible to scholars, the public records of the realm, that these rich and well-nigh inexhaustible stores of general knowledge have been rendered available for any literary or scientific purposes. Thus it is that the whole aspect of historical science is undergoing a change : thus it is that henceforward we shall be able to consider events and periods not only as they appeared to authors who lived in an age somewhat nearer to them than our own, as we have hitherto done ; but, also, by the light of absolutely contemporaneous documents of undeniable authority, and with the aid of facts, details, and statistics recorded on the spot, and therefore beyond the suspicion of much preparation or distortion. Sir Francis Palgrave, than who, perhaps, no one was ever better qualified to form a just opinion on anything connected with our national history or literature, gave in his Twentieth Report as Deputy Keeper, an able summary of the chief points wherein the value and importance of the public records are especially manifest.

“ Whether we consider them in relation to antiquity, to continuity, to variety, to extent, or to amplitude of facts and details, they have no equals in the civilised world. For the archives of France, the most perfect and complete in Continental Europe, do not ascend higher than the reign of St. Louis ; and, compared with ours, are stinted and jejune. Whereas in England, taking up our title (so to speak) from Domesday, the documents, which under the joint operation of ancient usage, the Record Act, the Treasury Minute of 8th August, 1848, directing the incorporation of the State Paper Office with the Public Record Office, and the Order in Council of the 5th March, 1852, are, or will be placed under the care of the Master of the Rolls, contain the whole of the materials for the history of this country, in every branch and under every aspect, civil, religious, political, social, moral, or material, from

the Norman conquest to the present day. Chasms there are; but the only one of importance is that intervening between Domesday and the great rolls of the Exchequer, viz. from 1088 to 1130; and, inasmuch as in the reign of Henry II. we have authentic testimony that no documents of the reign of the Conqueror, with the exception of Domesday, existed, it is most probable that none were ever framed. But with respect to subsequent periods, though occasionally particular classes of documents may fail us, yet the place of the documents lost, or non-existent, is generally supplied by others affording information nearly equivalent.

“ It is needless to state that the Public Records, accompanied by the State Papers and Government Archives, now united to the department of the Public Records, constitute the backbone of our civil, ecclesiastical, and political history; but their value is equally great for the investigation of those special and collateral subjects, without which the mere knowledge of public or political affairs affords but a small portion of the information needed for elucidating the march of history and the mutations and progress of society.

“ The real history of the Courts of Common Law and Equity, nay, of every branch of jurisprudence, awaits a competent inquiry; and so far as respects their earlier eras, the standard work first placed, or which used to be first placed, in the hands of the legal student, is a congeries of errors, equally with respect to our ecclesiastical, our political, and our legal institutions.

“ The statistics of the kingdom, in every branch or head of inquiry—revenue, expenditure, population, trade, commerce, or agriculture—can from these sources be investigated with singular satisfaction and accuracy.

“ In some respects no portion of their contents will be found more interesting than those contained in the Minute Books unto the year 1800, transmitted from your Majesty’s Treasury, of which the existence even can scarcely have been said to have been known. For naval history, in like manner, the Admiralty documents are of the greatest importance. Nor less useful will the State Papers, Government Papers, Records and Archives, prove for the exploration of special subjects of research. The series of diplomatic documents commences with the credentials of the Flemish Ambassador to Richard Cœur-de-Lion. The documents, now opened, afford untouched mines of information relating to private history of persons and families. Hitherto, genealogical inquiries have not received in any competent degree the attention which they deserve, whilst local topography, though cultivated with more diligence, has, for the most part, been pursued with reference to objects of inquiry which do not afford information in proportion to their accumulation; yet the general history of a State can never be understood without the most complete and searching analysis of its component parts and elements. Genealogical inquiry and local topography, which in many cases afford the most valuable supplementary comment, elucidating events and supplying comments, which cannot be unworthy of the attention of the philosophical inquirer, are amongst the best materials he can use. The particular history of the fortunes and changes

of any one noble family, individualises the events of general history ; and the rise or fall of any one lineage, even if humble, is, perhaps, the clearest exponent of the progress and mutation of human affairs. So, also, in like manner, the history of a county, a hundred, or a township, if properly investigated, disinters the most important facts with regard to the general state and condition of society, giving facts instead of theories, figures instead of surmises. There are manors or townships through which the history of the Lord and the Tenant, the Hirer and the Servant, the Landlord and the Labourer, may be pursued accurately and amply for all practical purposes, from the conquest to our living times."

This was written in 1860, and already we may note with national pride the advance that has been made by numerous and able scholars, the companions or followers of Sir F. Palgrave.

The valuable series, published with the sanction of her Majesty's Treasury, under the direction of the Master of the Rolls, of Calendars of State Papers and other documents preserved in the Public Record Office, is receiving yearly many additions of ever-increasing interest and importance ; whilst the twin series of chronicles and other original materials for the history of this country progresses at an equal pace. The great fundamental work of this latter series, a complete catalogue of all such materials as are known to exist throughout the kingdom and elsewhere—in the British Museum, the Lambeth Library, the Bodleian, the various collegiate and cathedral libraries, and other repositories—has recently been completed to the year 1200, by Mr. Duffus Hardy, the Deputy-Keeper of the Public Records, one of the most industrious, as he is certainly one of the most able, of living archivists. This catalogue must henceforth be the guide and handbook for every student of, or writer on, our earlier history. "For the first time, notices of all the known sources, printed and unprinted, of English history, are here presented to the reader in one continuous sequence." It comprises not only an analysis of each work, and a biography (where such is known) of the author, but also an estimate of how far it may be considered genuine, authentic, and original ; and a critical summary of its historical value. In the Preface to the Second Volume, Mr. Hardy says, with a just pride in his really gigantic undertaking, "I am not aware of any attempt that has been made, before my time, to place in the hands of the reader a descriptive catalogue of the materials of English history, in which those materials should not only be arranged from the earliest period in chronological order, but the manuscript authorities for them, in all countries in the world, be accurately described, their place and age ascer-

tained, and their authenticity and different degrees of credibility determined."

The immense number of mediæval chronicles (for as a general rule each great monastic house possessed one of its own compilation), their great bulk, and their dispersion, have hitherto rendered the task of thoroughly consulting and comparing them for any one purpose perfectly impracticable. These peculiar difficulties are, of course, added to those which must always attend the study of ancient manuscript literature; those, namely, caused by imperfect preservation of documents, illegibility of old hands, peculiarities in orthography and diction (particularly observable in monastic Latin), extensive use of contractions, obsolete technicalities, and irregularities of chronology. The endless confusion that might arise from the last source alone, spite of most careful editing, may be imagined from the fact that almost every remarkable event (even such as a plague, an eclipse, and the like) has been used by some authors to fix other dates; whilst those who have dated from the Christian era are scarcely more definite; for with some the computation has been from the Passion, with others from the Resurrection, with others from the First Preaching of our Lord, and others again have taken the "Verus Annus," two years earlier than the Vulgar or Dionysian era, as their base. Even in the most precise records the chronology requires considerable care, owing to the variations of the old legal, the historical, and the regnal year. For instance, in a legal record of the last century, the twentieth of *April*, 1738, is said to be in the *eleventh* year of George II., whilst in the next line, the twelfth of *January*, 1738, is said to be in the *twelfth* year of the said king; the explanation, of course, being that the legal year, 1738, extended from March to March, respectively, of the historical years 1738, 1739. It is curious to observe that this fact has caused a confusion even about some most important dates; for the execution of Charles I. is stated in all records of the period to have occurred in January, 1648, and this date has been accepted by some historians as the historical date. It was so engraved on the great seal of the Commonwealth, "ON THE FIRST YEAR OF FREEDOM, BY GOD'S BLESSING, RESTORED, 1648:" whereas the historical year 1649 had already commenced. Indeed, according to the continental computation (for in Catholic countries they had already rectified the almanack by introducing the new style, *i.e.* by dropping eleven days, which was not done in England until 1752), the date was February, instead of January, 1649.

Notwithstanding these numerous and serious difficulties, there has been a continued succession of men from the earliest dawn of historic literature in England, who have attempted, with varying ability and success, the task of editing chronicles, state papers, and other documents pertaining to the class of archives; a series of archaeological writers whose labours are being admirably crowned, and whose aspirations are being consummated, by the genius and zealous industry of Mr. Hardy and his colleagues.

In the preface to the first volume of the catalogue, Mr. Hardy gives an interesting and useful *résumé* of the works of his predecessors in this field. Boston is the first on the list; but John Leland has earned the title of "the father of English antiquaries," the Chaucer of archivists. His catalogue of English writers has formed the basis of all works on this subject since his time; and it was he who entreated Cromwell, then Secretary of State to Henry VIII., to save the masses of ancient MSS. that were being scattered and destroyed by the dissolution of the monasteries, and to have them collected and preserved in the King's Library. Leland was followed, after an interval, by Bale and Pits, who did comparatively little more than copy or paraphrase his works. Succeeding authors added their contributions, more or less valuable, to this branch of literature; but it is to the splendid industry of Tanner that we owe such a work as his "Bibliotheca Britannica Hibernica," a collection that for bibliographical acumen has never been surpassed, perhaps never rivalled. Herein we get the complete text of Leland accurately revised; and numerous other authorities are quoted or epitomized. Mr. Hardy says, "On all questions connected with the early literature of our nation, Tanner's *Bibliotheca*, notwithstanding its many omissions, defects, and redundancies, is still the highest authority to which the inquirer can refer."

All these works partook somewhat of the nature either of literary biographies, or of catalogues of writers. Meanwhile the actual editing of the texts was not entirely neglected; though the work has for the most part (until recently) been performed with very little critical judgment, and with a lamentable want of attention to the difficulties of mediæval chronology. Parker, Savile, and Twysden, were the best among the early editors; and Savile's "Scriptores Post Bedam" contains many of the most valuable writers of the time of the Norman and Plantagenet kings. The "Decem Scriptores," the joint production of Selden, Ussher, Twysden, and Somner, was even better executed; but, in succeeding

collections, the faults, inaccuracies, and obscurities already complained of, accumulated and multiplied ; until at length the attention of Government was forcibly drawn to the subject ; and the result was the great "Monumenta Historica Britannica," edited (until its suspension by the Record Commission) by Mr. Petrie. After his death, the experiment was for a time given up ; but public opinion had become too fully alive to the necessity for some such authoritative scheme, to allow it to be entirely abandoned. It was supported by all the influence and energy of the late Master of the Rolls, Lord Langdale, who was devotedly attached to the cause of record literature. It was the right and natural offspring of the Record Commission, and the establishment of the Public Record Office ; and the appointment of Sir John (now Lord) Romilly as Lord Langdale's successor at the Rolls, and as Keeper of the Records, ensured a continuance of the same vigorous and enlightened policy that characterised his predecessor ; a policy advocated with the same ability and perseverance, and happily with better success. The plan, though under an entirely new aspect, was again taken up by authority, in 1856 ; and the two series that we have mentioned, of "Chronicles" and "Calendars" respectively, were set on foot, and have been maintained, at the public expense. These two series are being produced simultaneously ; and the editing is, it appears, as far as possible, confided to men of acknowledged ability, each in his particular department. The calendarers are not selected from the officers of the Record Office alone, though it is understood that their labours (with the exception of those of Mr. Brewer, who has a special dispensation) are to be confined to documents deposited in that office. The supplementary aid, however, the Reports inform us, only applies to records subsequent to the reign of Henry VIII. ; all documents anterior to that date are to be calendared by the office itself.

The comprehensive collection of "Chronicles and Memorials of Great Britain and Ireland during the Middle Ages," being a *quasi* second series of the "Monumenta Historica Britannica," proves of the greatest possible value and interest ; and is apparently intended to supply gradually, and in minute detail, full and complete information of those materials of history, of which Mr. Hardy's catalogue is at once an index and an epitome. Each edition is prepared as an *editio princeps*, from an accurate collation of the best manuscripts ; and contains a description of the MSS., of their age, and peculiarities ; a brief account of the life and times of

the author (where authentic materials for it exist), and an estimate of his historical credibility and value; an elucidation of the chronology; a facsimile of a small portion of MS.; a glossary; and the sources of information possessed by the writer.

The value of the calendars of records and state papers, produced in the Public Record Office, or by the editors employed under the Master of the Rolls, cannot be estimated too highly. As early as the year 1693, an attempt was made to place what Mr. Hardy terms (in his preface to the Catalogue) "the documentary history of this country" on a better footing. Rymer, the Historiographer-Royal, was commissioned "to transcribe and publish all the leagues, treaties, alliances, capitulations, and confederacies which had at any time been made between the Crown of England and other kingdoms, as a work highly conducive to the service and the honour of the realm." That it was so, the reputation of his great work, the "Foedera," has well proved. The rolls of parliament from Edward I. to Henry VII., were published by Government in 1767, and form a magnificent series for the complete study of our constitutional history. But to print all our Records thus *in extenso* must of course be impossible: and even if possible, would be unnecessary and absurd. What has always been wanted has been a complete set of accurate and minute indices and calendars; and the volumes of the present series promise to supply that want for the state papers. They are not calculated or intended to supersede the necessity of consulting the originals; but forming what may be called a thematic index, they guide the inquirer to those documents, and those alone, that contain the information for which he is searching. They nevertheless give a complete general knowledge of the originals, and are sufficiently full to afford to such students as are unable to consult the records themselves, accurate information about their contents. This is a boon to a very extensive class; for whilst many are prevented from searching the originals by the fact of their living at a distance from London, still more even of those who have the opportunity cannot avail themselves of it, owing to the difficulty of reading the hands in which those originals are written. Those whose scholarship and technical knowledge enable them to wade, slowly and laboriously, through the mass of MS. bearing on the subject they wish to investigate, find that there are still many very serious impediments to a thorough comprehension of their materials; even if their time and patience suffice to carry them through the mere task of collection. These impediments surmounted, where possible,

once for all by the editors in the preparation of the Government calendars, are noticed by Professor Brewer in the report on his *Calendar of the Henry VIII. Papers*. His remarks apply more especially of course to state papers; which from their nature, as we shall see, are more liable to dispersion and other mishaps than the generality of records proper. He speaks of the general ignorance as to the various locations of any particular class of papers, often diverted from their nucleus at the Rolls to innumerable other repositories in different parts of the kingdom; and even when these have been searched and exhausted, numerous chasms will often remain, only to be filled in by consulting foreign stores like the archives of Simancas, Venice, and Paris. He complains of the difficulty of *finding* the documents required, even when the place of their concealment is known. "Important letters or their drafts are sometimes found in one collection, and the answers to them in another: even different portions of the same document are not unfrequently found in different libraries." Letters in cipher and their keys have been similarly treated; enclosures bearing no date have been removed from ambassadors' despatches, and placed in other collections. Even to Mr. Brewer, state paper chronology has presented many difficulties: "Some commence the year at Christmas, some at Easter." Speaking of the evil effects of fire (alluding particularly to the disastrous fire among the Cottonian MSS. in 1720): "In some instances the leaves of the MSS. got loose as the bindings or fastenings were destroyed by the flames, and were afterwards replaced at hazard. And thus addresses have not unfrequently been attached to the wrong letters, the leaves of one dispatch been mixed with those of another, the inner margin been turned outside, the order of the paging inverted," &c., &c. The treasure of learning obtained from the proper collocation and calendaring of the series, well repays the arduous labour of the task, as may be seen from Mr. Brewer's description of the contents of his first volume. A mass of original correspondence of Henry VIII., of his sister and his daughter Mary; of Wolsey, Cromwell, the Howards, Charles V., Francis I., Louise of Savoy, and Maximilian, forms but a portion of the rich store. "They fully and minutely illustrate the character of Henry VIII., both in his public and private capacity. They throw a most vivid light on the religious, political, social, and financial proceedings of his reign, and afford a curious insight into the manners and customs of the time. The first traces of the Reformation are here to be faintly discovered. They illustrate

at the same time the general history of Europe in an extraordinary degree. The very sayings and doings of the sovereigns and statesmen on the continent are made conspicuously prominent, and the most minute evidence is preserved by eye and ear witnesses of their words and actions."

The state papers of the reign of Charles II., edited by Mrs. Green, present an almost equally lively picture of the domestic and political history of that later age. In naval statistics they are especially full. They give in the mass a clear idea of the nature and strength of the naval force of England, and contain multitudinous details relative to its appliances, management, and strength.

In a series where each volume contains so much that is interesting and valuable, it would be impossible to enumerate all the important subjects on which new light is thrown ; to point out a few of the more prominent must here suffice. It is worthy of note, that whilst the primary effect of the fresh information has been to upset preconceived notions and popular prejudices about many persons and events, it has not unfrequently happened that further and more searching investigation has considerably modified the new impressions. In some cases, as for instance in that of Henry VIII., the alternations of good and evil report have occurred more than once ; and have given rise to so much controversy, that we are still left almost in doubt whether the character of that extraordinary monarch was such as has been popularly attributed to him—that of an unscrupulous tyrant, remarkable chiefly for indolent extravagance, imperious rapacity, and unbounded sensuality ; or whether he was not rather a profound and able statesman, endowed with deep religious convictions, possessed of the requisite power and energy for carrying those convictions into effect, and only to be pitied for singular misfortunes in his domestic relations. The characters of the so-called "bloody" Queen Mary, and of Mary of Scotland, have experienced somewhat similar treatment ; we see under a new and occasionally a changeable light, the soaring ambition and commanding abilities, the splendid career and terrible downfall of Wolsey ; James I. and his grandson Charles II. ; Somerset and Northumberland ; Cecil, Leicester, and Essex ; the motives and actions of Charles I. both before and during the Civil War ; the intentions, resources, and treatment of the Guy Fawkes conspirators ; on each and all of these, with numerous other instances, new or qualified opinions may have been formed ; but we cannot doubt that, whether we are led on the whole to endorse the judgments of past generations, or to modify or

reject them, we do so with much better reason and on more trustworthy authority, than our predecessors could possibly have possessed in forming those judgments.

The state papers of the reign of James I. here calendared by Mrs. Green, contain a number of original documents concerning the Gunpowder Plot; about which (as about other events in which religious feelings and sympathies have been to a greater or less extent implicated) experience has taught us the difficulty of forming an accurately impartial notion, even from the accounts of the most unbiassed historians. A like value attaches to Mr. Thorpe's Calendar of the Scotch papers, in the portions relating to the ill-fated lady who expiated her follies and—as some say—her crimes, at Fotheringay: and to Mr. Bruce's papers of the reign of Charles I.; wherein, too, may be found many entries relating to such perplexed questions as the authority of the Star Chamber, and the imposition of ship-money. The colonial documents edited by Mr. Sainsbury, constitute a mine of information on the history of our dependencies; a subject which, vast and important though it be, has been comparatively little studied at home: whilst Mr. Hamilton's Calendar of Irish papers has a peculiar interest now that recent troubles have been attracting more than the usual attention to everything connected with that kingdom. Reference has already been made to the fact that numerous blanks in the historic continuity of many of these series, may be filled up by the careful investigation of continental archives; fortunately for scholars and the reading public, this want has been provided for as far as circumstances would permit; and the labours of Mr. Rawdon Brown at Venice, and of Mr. Bergenroth at Simancas and Paris, are already bearing rich fruit. A striking instance of the value of these foreign researches, may be seen by a comparison of the later with the earlier volumes of Mr. Froude's important work; in his history of Queen Elizabeth, he presents us with a novel view of her character, drawn almost entirely from the secret correspondence of the Court of Madrid with its agents in England. It may be incidentally noticed, in connection with this fact, that much of the earliest authentic Irish literature is to be gleaned from repositories at Milan and St. Gall.

Besides the official and semi-official labours of the Record Office, and its supernumeraries represented by Mr. Brewer and his coadjutors, and in addition to such works as Mr. Froude's, treating directly on the science of history proper, numerous scholars are now beginning to unfold the treasures of our

archives in every branch of research. Take for example a work in the course of publication by the Oxford Professor of Political Economy, the Rev. J. E. T. Rogers, on the "History of Prices in the Middle Ages," the materials for which have been mainly obtained from the Record Office; and many works on genealogy, topography, domestic and social history, and antiquities, are continually appearing, all derived from the same source. Genealogy, in particular, has been enriched by a work edited by Mr. Roberts, Secretary of the Public Record Office, entitled, "Calendarium Genealogicum," which is a species of index to all the important matter concerning that science in the inquisitions during the reigns of Henry III. and Edward I. In the *Gentleman's Magazine* for April, 1846, occurs the following opinion on this subject, which is, undoubtedly, a tolerably accurate one: "There can be no question that the most valuable of all unpublished records are the indentures of fines prior to the Reformation, and the Chancery proceedings subsequent thereto; for from these two series a complete history of every estate in the kingdom, and every family of any real property, might be compiled, extending from the reign of King John down to the present century." For topography and local history a like value may be assigned to the same rolls, to the "Placita Terræ," the "Pedes Finium," and some others. For these and kindred literary subjects (apart from ordinary legal researches), upwards of 11,000 documents are annually consulted in the Public Record Office; and an extract at hazard from the published lists of the subjects of inquiry will display at once their multifarious character and their interest. Searches have been made for "The History of the Jews in England" (ample materials for which, by the way, are contained in the Close Patent and Fine Rolls, the Jews Rolls, the Memoranda Rolls of the Exchequer of the Jews, and the Pleadings before the Justices of the Jews)—"History of the Isle of Wight,"—"Particulars relating to John Hampden"—"Work on Military Statistics"—"Meath Abbey and Welsh Antiquities"—"Pedigrees of chief Families of the Midland Counties."

The public records have been called, "The Muniments of the Kingdom," and "The People's Evidences;" and, in our survey of their contents, we shall see that each of these titles is respectively appropriate, as we consider them in their relation to the crown and to the kingdom collectively, or in relation to the public generally. Historically, they are continually presented to us in these two aspects; and their comparative soundness and perfection is owing to the solicitude

for their preservation, fitful it is true, but still constantly asserting its existence, displayed by the sovereign on the one hand, and by the nation at large on the other. Prynne, who was keeper of the Records in the Tower (temp. Car. II.) in his preface to the fourth volume of Parliamentary Writs, says :—

“I presume it will be your Majesties especial care (as it was your Royal predecessors) to preserve these ancient Records not only from fire sword but water moths canker dust cobwebs, for your own and your Kingdom’s honour, service, they being such sacred reliques, such peerless jewels, that your noble ancestors have estimated no place so fit to preserve them in as consecrated Chapels, or Royal Treasuries and Wardrobes, where they lay up their sacred crowns, jewels, robes, and that upon very good grounds they being the principal evidences by which they had supported defended their Crowns, Kingdoms, revenues, prerogatives, and their subjects their respective lands, lives, liberties, properties, franchises, rights, laws.”

The present (or, at all events, recent) condition of these “sacred reliques” demonstrates too clearly how little of this necessary attention was actually bestowed on them. Prynne, in his enthusiasm about his “peerless jewels,” was the type of only a very small number of those to whose care the Records were confided ; he, it is true, “designed, endeavoured the rescue of the greatest part of them from that desolation, corruption, confusion, in which (through the negligence, nescience, or slothfulness of their former keepers) they had for many years by past layen buried together in one confused chaos under corroding, putrifying cobwebs, dust, filth, in the dark corner of Cæsar’s Chapel in the White Tower, as mere useless reliques not worthy to be calendared, or brought down thence into the office amongst other Records of use.” He adds, “In raking up this dung heap (according to my expectations) I found many rare antient precious pearls and golden records, etc.” We may compare with this account a report, in 1836, of the state of the Miscellaneous Records of the Queen’s Remembrancer, deposited in sheds in the King’s Mews. Here were 4,136 cubic feet of archives, all damp, and covered with the dust of centuries. Some were in a state of inseparable adhesion to the stone walls. There were numerous fragments which had only just escaped entire consumption by vermin, and many were in the last stage of putrefaction. Decay and damp had rendered a large quantity so fragile as hardly to admit of being touched ; others, particularly those in the form of rolls, were so coagulated together that they could not be uncoiled. Six or seven perfect skeletons of rats

were found embedded (one of which is still preserved in the office as a curiosity) and bones of these vermin were generally distributed throughout the mass; and, besides furnishing a charnel house for the dead, during the first removal of these national records a dog was employed in hunting the live rats which were thus disturbed from their nests.

In order to understand the history of our records, it is necessary to know clearly of what they consist, and how they arose in their respective classes. The documents that are placed in the custody of the Master of the Rolls, as Public Records, by the Act of Parliament, are therein specified to be, all rolls, records, writs, books, proceedings, decrees, bills, warrants, accounts, papers, and documents whatsoever, of a public nature, belonging to her Majesty, or now deposited in any of the offices or places of custody before mentioned. This definition is intended merely as an exhaustive description, without any attempt at classification. In dividing them into different classes, different systems have been followed by different writers on the subject, according to their various ideas of clearness, or their various objects in view. That adopted by the Record Commissioners in their Report, is perhaps the most lucid and convenient, though not sufficiently logical or consistent to please the author of the "Handbook to the Public Records;" who quotes it, but suggests another, still less satisfactory, as we think. They enumerate four great families, or divisions:—

I. Independent Records, relating to many subjects, persons, and places; but altogether comprising only one whole (*i.e.*, each complete in itself, not in the form of a series; having for the most part a particular essential object and a comparative simultaneity). The instances given are Domesday Book, the Taxation of Pope Nicholas, and the *Valor Ecclesiasticus* of Henry VIII.

II. Series of Inrolments, comprising, upon rolls each consisting of many membranes united the one to the other to form a continuous roll, varieties of separate and distinct entries; classed together either according to their formal character, as the Close, the Patent, and the Charter Rolls; or according to their subject-matter, as the Liberate, the Oblate, the Norman, or the Gascon Rolls.

III. Records containing entries of judicial proceedings; in which each subject-matter has a distinct roll, and the several rolls of a particular term, or other period, are all bound together at the top, the ends hanging loose.

IV. Separate documents, such as letters, inquisitions, com-

missions, privy seals, and all the other various descriptions of formal instruments.

This last class is a very comprehensive one; as is evident from the vague terms in which it is described, which, if taken literally, would apparently make it clash with the first class, and cause a cross-division. It is, however, probably meant as a description in general terms of what are technically known as "State Papers," though intended to include also certain peculiar classes of records proper. Our brief sketch may then, in the main, follow the arrangement here pointed out; taking care, however, to keep the state papers in a class by themselves, as forming a great category universally recognised by record students, and as having been until very recently under separate guardianship and in a separate repository. They consist of the correspondence and other records of the Privy Council, the Secretaries of State, and all other public departments. They are classed under three great heads—the Foreign, the Colonial, and the Domestic Papers. The Foreign Papers contain the correspondence of the Government, with its ambassadors, ministers, consuls, or agents abroad; herein we may trace the entire course of negotiations on such important subjects as alliances offensive or defensive, treaties of peace or commerce, acquisition or cession of colonies, royal marriages, and the like; and whilst they afford much information to the English historian on the whole subject of our relations at different periods with other powers, their immense value to the student of general history is manifest.

The Colonial Papers consist of the correspondence with the governors or commanders-in-chief of all our colonies and dependencies. They comprise almost the entire history of America, down to the peace of 1783; whilst there is a vast mass of MS. relating to the West Indies, the Canadas, the East Indies, and Japan, from the period of our earliest "plantations" to recent times. The Patent of Incorporation to the Marquis of Westminster and others, merchant-adventurers of England, for "discovery of lands unknown, and not before frequented" (of which Sebastian Cabot was to be the first governor), though apparently Colonial, is placed in the Domestic Series; which is the case also with many other papers, containing accounts of the voyages and discoveries of Frobisher and Hawkins, of Gylberte, Drake, and Raleigh, to Africa, America, and the West Indies. The Domestic Papers are more miscellaneous in their character than the other two divisions, the home correspondence of the Privy Council and

the Home Office being their basis. Some letters, extracted from this series, may be interesting; as giving the *ipsissima verba* of the original writers, and as exemplifying (it may confidently be asserted) the advantage of thus studying history from the words of men who were themselves sometimes the principal actors therein. The first is a letter from Sir Walter Ralegh to Sir Robert Cecyll, giving him information of an impending Spanish invasion in 1601. The indorsement is also prefixed, as showing the importance attached to the news, and the speed of travelling at that time.

“ For her Majestie’s speciall affaires; hast, post hast, hast for life att your uttermost peril, Sherburne the 26 of Sept^r att 10 o’clock the forenone, Shafton att 3 of the clok in the afternone, att Sarum att 10 o’cloke at night, att Andover at 9 o’clock in the morninge being Sonday.”

“ Sir Walter Ralegh to Sir Robert Cecyll.

“ 26 September, 1601,

“ Sr,—Ther arived att Wemouth on friday the 25th of this September, to skottishmen, the on called Robert Blamshill, the other Robert Perisoun, marchants of Aburdene. They departed Lysbon, the thirde of this present, who affirme on their oathes, that they weare stayde att Lysbone and Sit. Uvall eyghten weeks, and that ther departed from Lysbonne tenn dayes before their cumminge from thence a fleet of great Spanishe shippes to the number of 36, and wth them 3 Irishe shipps, an Irishe Byshoppe wth many priests and other Irishe men. They all gave out y^t they intended to land ether att Cork or Lymbrike, the number of men weare 8000, whereof 6000 soldiers, the other 2000 weare to bring back the shippes, they weare well furnished wth vittell munition and money and had also wth them many weemen.

“ It seemeth by this report y^t a plantation is ment. The skottishe seem to be very honest men, and this intelligence differeth littell from y^t I sent yow from Jersey all w^{ch} I leve to your better judgment and rest your most assured to do yow service,

“ W. Ralegh.

Wemouth, this 26 of September.”

The following is a most graphic account of the defeat of the Spanish invaders and Irish rebels, by the Lord Deputy of Ireland. It was written by Sir Dudley Carleton to John Chamberlain, in January, 1602, and may be peculiarly interesting after the recent Fenian vapourings on the subject of American invasion :—

“ Th’ enemy being 6000 strong, amongst whom were 300 Spaniards of those w^{ch} came last to Castel, had an intent to have assayed our camp the 22nd of the last by night wth purpose either to have made way for relieve into the towne of Kinsale, the Spaniards to have abandoned

it and come safely owt and then wth theyr whole force joynd to have sett uppon the Deputy's camp. They began theyr march at eight of the clock in the night, being distant from owr camp abowt six mile; but by reason of Odonells subteln to guyde th'armye through unknoune passages to skape unseene of o^r sentinels of horse and the long time the Spaniards spent in ordering and disciplining the stragling and unruly Irish, they wasted so much time that it was light day when they were discovered wthin a mile of the L. Toomont's quarter where they purposed to have given their attempt. The L. Deputy had his camp in arms eight dayes before still wayting theyr cumming, but at that time and in that placed looked for them last. Upon the alarum he sent downe the L^d Clanrickard, S^r H. Davers, Capt. Dutton wth three gentlemen more to beat in theyr sentinels and vew theyre ordre, who finding them at a stand and in dispute as they guessed whether to returne or give on it was resolved by the Deputy and Counsell of Warr to send owt 1500 foote and 700 horse wth if they came on might hold them in skirmish whilst the rest of owr armye might be in readiness or otherwise wayte uppon theyr retreyte.

" S^r H. Pore commanded our foote and the marshall S^r R. Wingfield owr horse, who finding them in theyr long order on a fast retreit, and passed a ford sent some light horse wth foote en croupe to stay them wth a loose skirmich. Th' Enemy seeing owr men come up putt themselves in battayle on a place wth was flancked on th' one side wth a bogg and on th' other, but somewhat farr of, wth a hill. Tyron wth his North Kearns had the vantguard, Capt. Tyrell wth the Spaniards and some Irish the Cattell and Odonell th' ariergard. Meane time S^r R. Wingfield, the L^d Clanrickard, S^r H. Davers, Capt. Williams wth theyr troopes of horse and two others, were come up, and had together a gros of 250 horse, who finding themselves so farre engaged by reason of a straignt they had passed and was taken by th' enemy that could not gett of wth owt much loose, thought it theyr best by charging the enemys horse to trye a fortune. At the first charge the horse fled and in the route brake and caryed away in disordre part of the vantguard, wth owr men seeing left the pursue of th' horse, wth never looked back, and charged the foote, where they saw them broken, who casting away theyr armes subjeccted themselves to execution, and were there all slayne save 60 wth escaped wth Tyron. Odonell wth th' ariergard escaped wth owt loss save onely of armes wth they threw away to run the lighter, and the Battayle had sped as well if the Spaniards had bin as goode footemen as th' Irish, but in runing ten skore they owt run 30 and left to the mercy of owr men where they were all slayne or taken; amongst whom was Alonso del Campo or as th' Irish call him Ocampo who was taken by Capt. Dutton but challenged as right to the Deputy. There were slayne in all of th' Enemy 1000 and of ows onely 2 men and abowt 15 horse. Owr foote never came up to fight so as if there were not difference in the names, th' actions at Turnhotte and Kinsale would hereafter be sayde to be the same. There were brought into owr camp 10 colors and 2000 armes. The Town was

sumoned upon the defeat, and newes was sent to them by two of the Spanish prisoners but no shew was made of yielding, yet the Judgment of the Deputy and all others that write from the camp the towne could not hold owt 10 dayes. The Deputy hath sent l^{re}s through the realme wth promise of reward to such as shall bring in any of these defeated rebels. Tyron is gone towards the north and Tyrell wth him. Odonell fled that night to Beere, but what is since become of him not knowne. There remaine 400 Spaniards fortified at Castels, Baltamore and Beere haven to secure those places for the landing of the D. of Parma who is expected wth 9000 Spaniards and Italyans to come as Viceroy for the K. of S. and as long as they stick fast and hold so goode footing I shall not think this late defeat (as many hold it) an end but a faire beginning of our warrs."

The Papers relating to the Gunpowder Plot, form a small but eminently interesting portion of the Domestic Series. Amongst them is the original "confession" of Guido Fawkes, with his autograph subscribed. A singular incident attaches itself to this document. We are informed in some accounts of the transaction, that Fawkes, from the excessive pain of the torture to which he had been subjected, fainted in the act of signing his confession; and we find a confirmation of this on examining the document; for it is evident that the trembling signature was interrupted halfway, and was afterwards recommenced in a somewhat bolder hand. This silent confirmation of evidence, even in a trifling matter, is curious; and cannot but present to the mind of the student in lively colours the whole story and its scene.

From the State Papers, we return to what are sometimes called the Records Proper; and these, if not more interesting, are infinitely more extensive, and quite as important. The leading characteristics of the first of our great divisions have been already given, under the heading of Independent Records. The "Valor Ecclesiasticus," was there mentioned as an instance of this class. This is the report of a survey, to give effect to a statute whereby Henry VIII. was put in possession of the first fruits and tenths. It contains returns of all dignities, benefices, offices, or promotions spiritual; and superseded the "Taxation of Pope Nicholas," which was of a similar nature, and was made in consequence of a temporary grant of those revenues by the Pontiff to Edward I., to defray the expenses of a crusade. The value of such complete surveys as these records afford, both legally and historically, in ecclesiastical matters, must be sufficiently apparent. But by far the most important, interesting, and useful of all records in this division, or indeed in any other division, is unquestion-

ably Domesday Book, which is recognised as the supreme authority in all matters affecting real property, such as questions of ancient demesne and the like. It has long since been printed in two folio volumes, with a third containing an index; and Sir Henry Ellis' learned and laborious "Introduction to Domesday," did much towards placing before the public the information it contains. The reproduction of the entire work in *fac-simile*, by means of photozincography, has lately been completed under the auspices of the Government: every page has been successively placed under a glass plate to undergo this operation; and the result is, that we have each county published exactly as it appears in the original.

Returning to our great General Divisions, the Second was typified by the Close, the Patent, and the Charter Rolls, and the Liberale, Oblate, Norman, and Gascon Rolls. These are, of course, only taken as examples of a class of records, so numerous and so miscellaneous, that the mere catalogue would in itself form a volume of no small dimensions; and the same is to be understood of the illustrations that we select from other divisions. The "Cartæ Antiquæ," are exemplifications of grants and charters from the sixth century to the reign of Henry III., and are the earliest chancery proceedings. The Charter Rolls extend from 1 John to 8 Henry VIII.; after which period grants from the crown were made in the form of letters patent, and were entered on the patent rolls. All royal diplomas are either charters, letters patent, or letters close; whereof charters are a species of letters patent, both being written on open sheets of parchment with the seal pendant at the bottom, and both addressed to all the king's subjects, and passing under the Great Seal; whereas letters close, supposed to be of a more private nature, and being addressed to one or two individuals only, were *folded up*, tied with silk, and sealed with the king's privy seal. The Patent Rolls commence in the third year of John's reign, the Close Rolls three years later. Information may be obtained from these rolls on almost any subject of antiquarian lore. The Letters Patent relate principally to the prerogatives of the crown, to the revenue, and to the different branches of judicature; to treaties, truces, correspondence and negociations with foreign princes and states; letters of protection, of credence, and of safe-conduct; appointments and powers of ambassadors, and the like. They also, with the kindred rolls, relate to matters concerning the internal economy of the kingdom; such as grants and confirmations of liberties, offices, privileges, lands, wardships; letters of incorporation,

congés d'élire, ecclesiastical presentations, creations of nobility, special and general pardons, special liveries, proclamations, and all manner of commissions. The Patents for twelve years of John's reign have been printed. The following is a copy (with the contractions extended) of an interesting entry in 1202, illustrating the king's relations with his unfortunate nephew Arthur not long before the untimely end of the latter. "Rex etc. dilecto nepoti nostro Arturo, etc. Mandamus vobis summonentes vos quod sitis ad nos apud Argentan in Octabus Paschæ, facturi nobis quæ facere debetis ligio domino vestro. Nos autem libenter faciemus vobis quod facere debemus caro nepoti nostro et ligio homini nostro. Teste me ipso apud Andely xxvij. die Marcie."

The best known and by far the most important of our charters, *Magna Carta*, is preserved at the British Museum, and in duplicate at Lincoln Cathedral and elsewhere; it was printed in *fac-simile* in the second volume of reports of the Record Commissioners.

Of the series of Inrolments that are classed according to their subject-matter, the Oblate Rolls contain accounts of free offerings and gifts to the King. The Liberate Rolls are more miscellaneous; subsequent to the time of Edward III., they contain little else than the orders for payment of salaries to the law officers of the Crown; but prior to that time, they consist of precepts for all manner of payments on the King's account, orders to ministers of the Crown for the delivery of lands, castles, and similar *liberations* or disbursements.

The rolls named according to the countries they are principally concerned with, are the Almain (relating to Germany and Flanders), the French, the Gascon or Vascon (for the period of our occupation of the Duchy), the Norman, and the Roman Rolls. Pertaining to this class are the Rotuli Scotiæ; and the Ragman Roll, which contains the submissions of the nobility, clergy, and others, in Scotland, to Edward I., and derives its title from one Ragimund, a legate at the Scotch court. The value of the Norman Rolls is heightened by the fact that all the archives relating to Normandy as a sovereign state, that existed in France, are supposed to have been destroyed by the policy of Richelieu. Those that we possess belong to the time of John, Henry III., Edward III., and Henry V.

The Judicial Proceedings, the third of our great divisions, are doubtless, in a legal sense, the most authoritative of all our records. A petition of the Commons (temp. Edward III.) affirms that "records, and everything in the King's Court,

ought to remain there for perpetual evidence and aid of all parties thereto, and of all those to whom in any manner they appertain, as occasion may require." Their high authority and importance are derived from their being absolutely authentic memoranda of proceedings, judgments, and the like, all originally produced either on oath or at all events in the most formal and solemn manner. The Decree, or the Judgment or Plea Rolls, are probably the best types of this class. In a literary or historical point of view, though of considerable use and interest, they are, perhaps, inferior to the classes that we have already indicated. This opinion, however, must be advanced with considerable diffidence; for to each particular student or searcher those documents will appear the most valuable that most especially illustrate his own subject of inquiry. As an instance of this fact, it may be noticed that when the Government Calendars of State Papers were instituted, it was at first proposed to leave to the discretion of each editor what documents should be calendared, and what should be omitted as uninteresting; but it was subsequently discovered that opinions on this point, even of those best qualified to judge, were so various and undecided, that it was necessary for the Master of the Rolls to direct all papers to be inserted impartially. The Records of Judicial Proceedings introduce, either incidentally, or as a matter of evidence, information concerning almost every conceivable subject; pedigrees, titles to estates, and local laws and usages, are to be proved therein; and we can understand from them the manners and customs of each age, its commerce, discoveries and improvements, the history of education and of crime, the lives and habits of the people, their employments and amusements, their quarrels, litigation, and agreements. We may adduce examples, like the following:—A. and B. go to law about an inheritance of an estate from a distant relative; and as a result of their dispute we have presented to us in some judgment or plea roll, a full account of the descent of the estate in question through several generations, of its extent and landmarks, its quality and value at that time, and a considerable portion of the pedigree of the disputants. Or, as an example of the more incidental information contained here:—in the reign of James II. one Sir Basil Firbrace accuses Sir William Russell and a Mr. Brett of having gotten from him, by unfair gambling and other illegal methods, a considerable sum of money; consequently, in one of the Chancery Decree Rolls (Roll 2,029), we find a detailed account of what may be designated as "card-sharping in the olden time,"—the lures by

which the unhappy victim was enticed to his ruin, the haunts of fashionable vice, the drinking and gambling bouts, the tricks at hazard and dicing, the inevitable catastrophe, and the too tardy remorse. It appears, then, to be a just inference from these considerations, that for much information about the masses of the people, we must search these apparently dry judicial records. Concerning events of national importance, or the lives of remarkable men, our other classes for the most part will supply all we need; but it is in this division that the student of social science, as well as the lawyer, and the legal historian, will find his chief mine of interest and knowledge.

We have now given a brief synopsis of the general contents of our national archives. The sketch has been attempted only in outline—παχνλῶς καὶ τύπῳ; any attempt to fill it in in detail would here be ill-placed. It remains to give an account in a few words of their origin, growth, and history, and of their present preservation and management.

It has already been stated that the origin of what we have termed the State Papers, was in the correspondence and memoranda of the Privy Council, the Secretaries of State, and the public departments generally. Those that were in the old 'State Paper Office,' appear to have undergone many dangers and vicissitudes; though, taken as a whole, they have not suffered to the same extent as many other records. The office was established for their care, and a Keeper, appointed by Queen Elizabeth, in 1578. James I. ordered that they should be removed from the chests in which they had hitherto been deposited, and placed in an apartment in his palace at Whitehall, to be "the readier for our use, and for the use of any of our principal secretaries." The palace was ravaged by a fire in 1619; but the State Papers were fortunately rescued, and were transferred to other quarters. After this escape their migrations were frequent. Removals must always be prejudicial to the good order, as well as to the good condition, of any collection of papers; and consequently, in 1764, the contents of the office had fallen into such confusion, that on a memorial from some eminent archaeologists, a commission was appointed to consider, and, if possible, to remedy the evil. This commission was in existence for thirty-six years; but it does not appear that it made any very considerable progress in its task; for the reforms then proposed were not thoroughly carried out until far on in the present century. In 1854 the office was entirely merged in the Public Record Office, and the papers have

since been finally carried to their present abode in the Rolls Buildings.

The Welsh records have perhaps suffered more than any other series. A government inspector (Mr. Black) was, in 1840, sent to examine them throughout the principality; and, in consequence of his report of the state of the records of fines—so important for the protection of titles to estates—a special Act of Parliament was passed to preserve existing landed rights. The Welsh records are mainly those of the “Court of Session of Chester,” and of the “Great Sessions of Wales;” though all the records of the County Palatine of Chester are frequently included with them. Assizes were held in Wales as early as the time of Edward I., immediately after the conquest of the country. Some of these records were described by Mr. Black as being soaked into heaps of fermenting pulp; rotting in damp cellars that were occasionally inundated by the overflow of the tide; eaten up by rats; and some, as an appropriate climax, had been currently sold by most keepers as waste parchment. The injured ones have now been for the most part restored, where restoration was possible; and the whole are in something like accessible order at the Record Office, where the work of arranging and calendaring them is said to be progressing satisfactorily.

The national muniments in the earliest times in England were deposited in the king's palace; or, when he travelled, in his temporary place of residence; for the Chancery, the Exchequer, and the Supreme Court of ordinary judicature, then styled *Curia Regis*, followed the king. The Castles of Pontefract, Tilbury, Tunbridge, and Swansea, have been, amongst many others, the resting places of collections of records. In that of Swansea, Edward II., on his attempted flight to the Isle of Lundy, deposited many very important documents; most of these were brought to London in succeeding reigns; but not long since, the original contract of affiance between that king and Isabella of France was discovered there, having probably been overlooked in the transfer of the others. John went so far as to remove entirely the receipt of Exchequer with the records thereof, to Northampton; it was soon, however, brought back to Westminster. In the troublous times of the Roses, and of the great rebellion, the records more immediately connected with the sovereign (the royal diplomas for instance) were, of course, much dispersed; under Charles I. many, undoubtedly, were left at Oxford and at York.

For the origin of the Chancery, as an office for making out

royal charters and precepts, we must go back to the obscurity of Saxon times ; we hear of it thus as early as the reign of Edward the Elder. During the period of the first, second, and third Edwards (after the Conquest) it began to acquire its later functions and jurisdiction. It was separated from the exchequer about the beginning of John's reign (the Court of Exchequer having been introduced by William the Conqueror) ; and the Chancery Rolls began at this time. The Court of Common Pleas was separated from the Curia Regis by Magna Carta ; and it was thereby ordered in future to be stationary at Westminster. At the present day very many courts and offices, subordinate to or in connection with the greater courts, have been abolished ; their functions being either no longer needed, or else discharged by some other arrangement. The old Court of Exchequer is now represented by the Audit Office, and by the Chancellor of the Exchequer ; its judicial duties falling to the lot of the Barons of the Exchequer. The Court of Star Chamber, the Court of Requests (called also the Court of Conscience), the Augmentation Office, the Hanaper Office, the Signet Office, with numerous others, have thus been put an end to ; whilst such courts as that of Chivalry, and that of Wards and Liveries, have fallen into disuse, or been disposed of, by the progress of events. We may notice, by the way, a curious illustration of the primitive method in which early records were preserved, from the name of one of these offices. The Hanaper Office was so called from the fact that, of certain writs, those that related to the affairs of a subject were deposited in a hamper (*in hanaperio*) ; which hamper subsequently developed into an office of some importance and expense. The collateral writs that related to business of the Crown were placed *in parva baga* ; whence, in like manner, arose the department of the Petty Bag.

The Treasury of the Exchequer in the Old Palace of Westminster early became the repository of the Records of the King's Bench and the Common Pleas, as well as of other documents, such as treaties, leagues, and the like. Subsequently there were four Treasuries of Records here, all of which ultimately merged in the Chapter House Record Office : where they remained until the recent union of all such offices. In the reign of Edward III., the Domus Conversorum Judæorum (now the Rolls House and Rolls Chapel in Chancery Lane) was annexed for ever to the office of Master of the Rolls ; and as many of the chancery proceedings had been habitually stored in the residence of this great officer of state, the House of Converted Jews became, after the time of Edward IV., a

regular Record Office, and forms a portion of the present one. The Tower of London was long considered a most suitable and safe repository. Edward I., whose ability and foresight in all matters of legal reform merited the title of the English Justinian, displayed great anxiety at all times for the safe preservation and good order of his archives. Amongst other arrangements for this purpose, he ordered the Papal Bulls to be removed from the receipt of the Exchequer to the Tower, and to be there properly cared for. Edward II., following his father's example, issued a Writ of Privy Seal to appoint proper persons to digest, calendar, and generally superintend the preservation of the documents in the Exchequer Treasuries and at the Tower. Edward III., Richard II., Henry VI., and Elizabeth, each in turn directed their attention to this subject, and endeavoured to devise some improved method of dealing with it. Their efforts were mainly confined to the records in the Tower, which were continually the objects of royal solicitude; we have already noticed the reforms that were attempted there in the reign of Charles II., when Prynne was their keeper. In 1703, Parliament took up the question; a committee of the House of Lords was appointed, and continued its labours, in a somewhat desultory fashion, until 1719. Then the matter was again allowed to drop, until it was at last revived in earnest by the Commons in 1800. The report of this latter committee is probably the most valuable book that has ever appeared on this subject: containing as it does the fullest returns from every one concerned with the care of records, or able to afford any information about them; whether in regard to their extent, their condition, their preservation, or their arrangement and then-existing management. The Record Commission appointed to give effect to this report, lasted for thirty-seven years; and was the immediate parent of the Public Record Office, which now discharges all duties connected with the national archives. The commission, notwithstanding the bearing of the report on which they were appointed, attempted little beyond the printing of the records: many of the works published under their auspices are extremely valuable and interesting; but the good arrangement of the original documents, the progress in indexing and calendaring, and the numerous other facilities for their study that we now possess, we owe to the late and present Masters of the Rolls, and to their Deputy-Keepers, Sir Francis Palgrave and Mr. Hardy.

The Record Act (1 and 2 Victoria, c. 94) was passed in 1838; it constituted the Master of the Rolls custodian and

guardian of all public documents comprised in the enumeration already given; and gave him power (under certain restrictions) to demand the surrender of them from the officers previously in charge of them, or (in the case of *accruing* records, *i.e.* of those that continually arise out of the proceedings of the courts or from other sources) to order their transfer to his care after the lapse of a certain time; the interval in each case being regulated by the requirements of the business of the particular office or court in which they were originally produced. Since the passing of the Act, the concentration of all the different collections at the general repository on the Rolls Estate has been gradually effected; those at the Tower, the Rolls Chapel (the greater portion of the sacred edifice itself had hitherto been encumbered by the accumulation of the documents) and the Chapter House, were united in 1840; and the final addition, that of the State Paper Office, was completed in 1862.

We have in the Reports before us, abundant evidence that much remains to be done before full and legitimate use can be made of the treasures whose character and history we have been considering. Many years must necessarily elapse before the neglect and mismanagement of centuries can be repaired—much labour and much patience will be required before the arrears thus produced can be surmounted—and the ever-increasing nature of the subject-matter will always be, even in more commodious buildings than the nation now possesses for the purpose, a trying test of their capacities for convenient arrangement; and will tax the energies, perseverance, and ability of a more numerous staff of officials than that of the present establishment. On the other hand, the Reports show us that much has already been done. We find that our archives are now for the most part stored in a repository, whereof every chamber is fireproof and free from damp, and over the condition and safety of which the most careful and incessant watch is kept both by the department itself and by the police; we find that, as far as is at present possible, their arrangement for purposes of reference and study is complete, so that almost any required document can be at once produced and consulted; and such facilities are now offered to the student by the courteous and liberal provision of the authorities, that a personal acquaintance with the original sources of our national history is placed within the reach of all.

ART. III.—*Narrative of an Expedition to the Zambesi and its Tributaries; and of the Discovery of the Lakes Shirwa and Nyassa, 1858—1864.* By DAVID and CHARLES LIVINGSTONE. 8vo. pp. 608. London: Murray.

ABOUT three centuries ago the Portuguese attempted to cross the continent of Africa, and thus connect their eastern and Western settlements; but to this day the feat has been accomplished by only one European, and that an Englishman, Dr. Livingstone, whose marvellous journey ended in May, 1856, at the mouth of the ZAMBESI, whence he sailed for the Mauritius on his way to England. From the Kongone mouth of this river, he commenced a new series of explorations in May 1858. His object was to test the navigability of the Zambesi in a small steamer, in the hope that it would be a highway for commerce to the heart of Africa, and then to examine its principal affluent, the SHIRE, which, flowing from the north, was supposed to be connected with a lake that in our school days figured in the maps of Africa as Lake MARAVI. How the lakes SHIRWA and NYASSA (the real Maravi and no mistake) were reached, the book will tell. A few months before Dr. Livingstone had reached the borders of Nyassa, Messrs. Burton and Speke, journeying from Zannibar, had discovered Lake TANGANYIKA, the southern extremity of which is probably not more than 300 miles from the northern shores of Lake Nyassa. It is also worthy of remark, that the subsequent journeys of the late lamented Speke, and of Grant and Barker, connect the previous discoveries of Burton and Speke with the NILE, the long hidden sources of which appear to have been traced to the Lakes NYANSA and NZIGE, and that this last-mentioned lake is situated not far to the north of Lake Tanganyika, and is probably connected with it. Thus the map of Africa is filling up; and to add to our knowledge of Eastern Africa, Dr. Livingstone is once more dedicating his life and energies.

“ The Government have supported the proposal of the Royal Geographical Society made by my friend Sir Roderick Murchison, and have united with that body to aid me in another attempt to open Africa to civilizing influences, and a valued private friend has given a thousand pounds for the same object. I propose to go inland, north of the territory which the Portuguese in Europe claim, and endeavour to

commence that system on the East which has been so eminently successful on the West Coast ; a system combining the repressive efforts of H.M. cruisers with lawful trade and Christian Missions—the moral and material results of which have been so gratifying. I hope to ascend the Rovuma, or some other river North of Cape Delgado, and, in addition to my other work, shall strive, by passing along the Northern end of Lake Nyassa and round the Southern end of Lake Tanganyika, to ascertain the watershed of that part of Africa. In so doing, I have no wish to unsettle what with so much toil and danger was accomplished by Speke and Grant, but rather to confirm their illustrious discoveries."—Pp. vi. vii.

The feelings of a native of the temperate north, when landing for the first time in the tropics, are compared to those "which the first man may have had on his entrance into the garden of Eden." Everything is new ; trees, animal life, and "the very sky itself, glowing with colours, or sparkling with constellations never seen in northern climes." The productive power of tropical lands is, however, in this utilitarian age, the measure of their importance and value. This delta of the Zambesi, "the whole of the fertile region extending from the Kingone canal to beyond Mararo, some eighty miles in length and fifty in breadth, is admirably adapted for the growth of the sugar-cane, and were it in the hands of our friends at the Cape, would supply all Europe with sugar."* Proceeding up the river, SENA and TETTE, the head settlements of the Portuguese, were visited ; the former contains a few large houses, sundry ruins, and an old cross on the site of a church no longer existent. It is surrounded by a stockade of living trees, its defence against the natives."

"Tette stands on a succession of low sandstone ridges on the right bank of the Zambesi, which is here nearly a thousand yards wide (960 yards). Shallow ravines, running parallel with the river, form the streets, the houses being built on the ridges. The whole surface of the streets, except narrow foot-paths, were overrun with self-sown indigo, and tons of it might have been collected. In fact indigo, senna, and stramonium, with a species of cassia, form the weeds of the place, which are annually hoed off and burned. A wall of stone and mud surrounds the village, and the native population live in huts outside. The fort and the church, near the river, are the strongholds : the natives having a salutary dread of the guns of the one, and a superstitious fear of the unknown power of the other. The number of white inhabitants is small, and rather select, many of them having been considerably sent out of Portugal 'for their country's good.' The military element preponderates in society ; the convict and 'incor-

rigible' class of soldiers, receiving very little pay, depend in great measure on the produce of the gardens of their black wives; the moral condition of the resulting population may be imagined. Even the officers seldom receive their pay from Government; but, being of an enterprising spirit, they contrive to support themselves by marrying the daughters or widows of wealthy merchants; and trade in ivory by means of the slaves, of whom they thus become the masters."—P. 45.

The Kebrabasa rapids, about 100 miles beyond Tette, impede the navigation of the Zambesi, and the steamer proving, unfortunately, unfitted for the nature of the work required, Dr. Livingstone's attention was directed to the Shire: for the sake of geographical unity, however, we may refer in this place to his subsequent journey from 1860 to January 1861, in which the course of the Zambesi was followed as far as the VICTORIA FALLS. We meet with names and places in this journey made familiar to us by the published "Missionary Travels" of 1857, but we must first satisfy our readers by a description of these remarkable Falls, called by the natives "Mosi-*oa*-tunya," or "smoke sounding," which, on the authority of Mr. Charles Livingstone, excel Niagara in grandeur and beauty, and even in volume of water when the Zambesi is in flood!—

"We landed at the head of Garden Island, which is situated near the middle of the river and on the lip of the Falls. On reaching that lip, and peering over the giddy height, the wondrous and unique character of the magnificent cascade at once burst upon us.

"It is rather a hopeless task to endeavour to convey an idea of it in words, since, as we remarked on the spot, an accomplished painter, even by a number of views, could but impart a faint impression of the glorious scene. The probable mode of its formation may perhaps help to the conception of its peculiar shape. Niagara has been formed by a wearing back of the rock over which the river falls; and, during a long course of ages, it has gradually receded, and left a broad, deep, and pretty straight trough in front. It goes on wearing back daily, and may yet discharge the lakes from which its river—the St. Lawrence—flows. But the Victoria Falls have been formed by a crack right across the river, in the hard, black, basaltic rock which there formed the bed of the Zambesi. The lips of the crack are still quite sharp, save about three feet of the edge over which the river rolls. The walls go sheer down from the lips without any projecting crag, or symptom of stratification or dislocation. When the mighty rift occurred, no change of level took place in the two parts of the bed of the river thus rent asunder; consequently, in coming down the river to Garden Island, the water suddenly disappears, and we see the opposite side of the cleft, with grass and trees growing where once the river ran, on the same level as that part of its bed on which we sail. The first crack

is, in length, a few yards more than the breadth of the Zambesi, which by measurement we found to be a little over 1,860 yards, but this number we resolved to retain as indicating the year in which the Fall was for the first time carefully examined. The main stream here runs nearly north and south, and the cleft across it is nearly east and west. The depth of the rift was measured by lowering a line, to the end of which a few bullets and a foot of white cotton cloth were tied. One of us lay with his head over a projecting crag, and watched the descending calico, till, after his companions had paid out 310 feet, the weight rested on a sloping projection, probably 50 feet from the water below, the actual bottom being still further down. The white cloth now appeared the size of a crown-piece. On measuring the width of this deep cleft by sextant, it was found at Garden Island, its narrowest part, to be eighty yards, and at its broadest somewhat more. Into this chasm, of twice the depth of Niagara-fall, the river, a full mile wide, rolls with a deafening roar; and this is Mosi-*oa*-tunya or the Victoria Falls.

“ Looking from Garden Island down to the bottom of the abyss, nearly half a mile of water, which has fallen over that portion of the Falls to our right, or west of our point of view, is seen collected in a narrow channel twenty or thirty yards wide, and flowing at exactly right angles to its previous course, to our left; while the other half, or that which fell over the eastern portion of the Falls, is seen in the left of the narrow channel below, coming towards our right. Both waters unite midway, in a fearful boiling whirlpool, and find an outlet by a crack situated at right angles to the fissure of the Falls. This outlet is about 1,170 yards from the western end of the chasm, and some 600 from its eastern end; the whirlpool is at its commencement. The Zambesi, now apparently not more than twenty or thirty yards wide, rushes and surges south, through the narrow escape-channel for 130 yards: then enters a second chasm somewhat deeper, and nearly parallel with the first. Abandoning the bottom of the eastern half of this second chasm to the growth of large trees, it turns sharply off to the west, and forms a promontory, with the escape-channel at its point, of 1,170 yards long, and 416 yards broad at the base. After reaching this base, the river runs abruptly round the head of another promontory, and flows away to the east, in a third chasm; then glides round a third promontory, much narrower than the rest, and away back to the west, in a fourth chasm; and we could see in the distance that it appeared to round still another promontory, and bend once more in another chasm towards the east. In this gigantic, zigzag, yet narrow trough, the rocks are all so sharply cut and angular, that the idea at once arises that the hard basaltic trap must have been riven into its present shape by a force acting from beneath, and that this probably took place, when the ancient inland seas were let off by similar fissures nearer the ocean.

“ The land beyond, or on the south of the Falls, retains, as already remarked, the same level as before the rent was made. It is as if the

trough below Niagara were bent right and left, several times before it reached the railway bridge. The land in the supposed bends being of the same height as that above the Fall, would give standing-places, or points of view, of the same nature as that from the railway-bridge, but the nearest would be only eighty yards, instead of two miles (the distance to the bridge) from the face of the cascade. The tops of the promontories are in general flat, smooth, and studded with trees. The first with its base on the east, is at one place so narrow, that it would be dangerous to walk to its extremity. On the second, however, we found a broad rhinoceros path and a hut; but, unless the builder were a hermit, with a pet rhinoceros, we cannot conceive what beast or man ever went there for. On reaching the apex of this second eastern promontory we saw the great river, of a deep sea-green colour, now sorely compressed, gliding away, at least 400 feet below us.

"Garden Island, when the river is low, commands the best view of the Great Fall chasm, as also of the promontory opposite, with its grove of large evergreen trees, and brilliant rainbows of three-quarters of a circle, two, three, and sometimes even four in number, resting on the face of the vast perpendicular rock, down which tiny streams are always running to be swept again back by the upward rushing vapour. But as, at Niagara, one has to go over to the Canadian shore to see the chief wonder—the Great Horseshoe Fall—so here we have to cross over to Moselekatse's side to the promontory of evergreens, for the best view of the principal Falls of Mosi-*oa*-tunya. Beginning, therefore, at the base of this promontory, and facing the cataract, at the west end of the chasm, there is, first, a fall of thirty-six yards in breadth, and of course, as they all are, upwards of 310 feet in depth. Then Boaruka, a small island, intervenes, and next comes a great fall, with a breadth of 573 yards; a projecting rock separates this from a second grand fall of 325 yards broad; in all, upwards of 900 yards of perennial Falls. Further east stands Garden Island; then, as the river was at its lowest, came a good deal of the bare rock of its bed, with a score of narrow falls, which, at the time of flood, constitute one enormous cascade of nearly another half-mile. Near the east end of the chasm are two larger falls, but they are nothing at low water compared to those between the islands.

"The whole body of water rolls clear over, quite unbroken; but, after a descent of ten or more feet, the entire mass suddenly becomes like a huge sheet of driven snow. Pieces of water leap off it in the form of comets with tails streaming behind, till the whole snowy sheet becomes myriads of rushing, leaping, aqueous comets. This peculiarity is not observed by Charles Livingstone at Niagara, and here it happens, possibly from the dryness of the atmosphere, or whatever the cause may be which makes every drop of Zambesi water appear to possess a sort of individuality. It runs off the ends of the paddles, and glides in beads along the smooth surface, like drops of quicksilver on a table. Here we see them in a conglomeration, each with a train of pure white vapour, racing down till lost in clouds of spray. A stone dropped in

became less and less to the eye, and at last disappeared in the dense mist below.

"Charles Livingstone had seen Niagara, and gave Mosi-*oa-tunya* the palm, though now at the end of a drought, and the river at its very lowest. Many feel a disappointment on first seeing the great American Falls, but Mosi-*oa-tunya* is so strange, it must ever cause wonder. In the amount of water, Niagara probably excels, though not during the months when the Zambesi is in flood. The vast body of water, separating in the comet-like forms described, necessarily encloses in its descent a large volume of air, which, forced into the cleft, to an unknown depth, rebounds, and rushes up loaded with vapour to form the three or even six columns, as if of steam, visible at the Batoka village Moa-chemba, twenty-one miles distant. On attaining a height of 200, or at most 300 feet from the level of the river above the cascade, this vapour becomes condensed into a perpetual shower of fine rain. Much of the spray, rising to the west of Garden Island, falls on the grove of evergreen trees opposite; and from their leaves heavy drops are for ever falling, to form sundry little rills, which, in running down the steep face of rock, are blown off and turned back, or licked off their perpendicular bed, up into the column from which they have just descended.

"The morning sun gilds these columns of watery smoke with all the glowing colours of double or treble rainbows. The evening sun, from a hot yellow sky, imparts a sulphureous hue, and gives one the impression that the yawning gulf might resemble the mouth of the bottomless pit. No bird sits and sings on the branches of the grove of perpetual showers, or ever builds its nest there. We saw hornbills, and flocks of little black weavers flying across from the mainland, to the islands, and from the islands to the points of the promontories and back again, but they uniformly shunned the region of perpetual rain, occupied by the evergreen grove. The sunshine, elsewhere in this land so overpowering, never penetrates the deep gloom of that shade. In the presence of the strange Mosi-*oa-tunya*, we can sympathize with those who, when the world was young, peopled earth, air, and river, with beings not of mortal form. Sacred to what deity would be this awful chasm and that dark grove, over which hovers an ever-abiding 'pillar of cloud'?"—Pp. 252—258.

We are sorry to learn that the power of the MAKOLOLO, which originated in the valour and wisdom of Sebituane, and had been upheld for a term by his son and successor Sekeletu, had begun to crumble away through the failing energies of the chief. After his death, which took place in 1864, the Makololo dominions underwent "the usual fate of African conquest" (we quote Dr. Livingstone): "that fate we deeply deplore, for whatever other faults the Makololo might justly be charged with, they did not belong to the class who buy and sell each other, and the tribes who have succeeded them

do."* One object of the journey up the Zambesi to the Makololo, was the restoration of the remains of the large party which, in 1856, had accompanied him to Tette. Some of them had not improved during their four years' residence in a Portuguese convict colony, some had married native women and declined leaving their adopted country. Of the ninety who started to return, one-third deserted before the Kebrabasa hills were passed. The remnant found that great changes had taken place among their families and friends in their absence. One man's wife had been killed on a charge of witchcraft; the two wives of another had married again. Masakasa was disgusted on hearing that his friends, believing him to be dead, had thrown his shield over the falls, and had slaughtered his cattle to keep up the jollity of a funeral feast (a sort of Irish wake); he said he meant to disown them, and to say when they came to salute him, "I am dead! I am not here! I belong to another world, and should stink if I came among you!" All the party had more or less to suffer in their domestic relations, but in African society these are comparatively trivial matters.

We now return from this episode in the narrative, to the three journeys (January to October 1859), in which the River SHIRE was followed as far as Lake NYASSA, whence it issues, and the Lake SHIRWA (to the east of the Shire) was discovered. The Shire is much narrower than the Zambesi (which at Tette is 960 yards wide), but it is deeper and more easily navigated. The Portuguese, after three centuries' occupancy of the country, had no knowledge of the course of this river beyond the first forty miles from its junction with the Zambesi. Its navigation is impeded by the Murchison cataracts, about 150 miles from its mouth; but these obstructions, as well as those offered by the Kebrabasa cataracts, to the navigation of the Zambesi, could easily be remedied by European skill. Lake Shirwa, 1,800 feet above the sea level, is a considerable body of slightly brackish water, containing leeches, fish, crocodiles, and hippopotami, and was discovered 18th of April, 1859. It has no connection with the Shire. Lake Nyassa was reached by a land party, 16th September, 1859. Just ten months later, Dr. Rossher, a German from Kiloa, reached a position near the northern extremity of this lake, but was unfortunately murdered on his return journey to the coast. This lake was found, on subsequent examination, to be about 200 miles long and from 50 to 60 broad. It is about

1,300 feet above the level of the sea. Like all narrow seas encircled by highlands, it is subject to sudden visitations of storms, which raise waves such as an experienced Irish fisherman declared he had never seen before. It receives no great affluent from the west, and the five streams which were noticed did not appear to bring so much water into the lake as the Shire was carrying out. The natives say that no river enters from the north. The land immediately adjacent to the lake is low and fertile, and densely populated. These results were obtained in 1859, before Dr. Livingstone visited the Makololo country. In 1863, on his return from the Rovuma, he spent from January to September in a further examination of the highlands west of the lake. This high land to the west and south-west of the lake comprises the country of the Mamganja, Maravo, and other tribes; while far beyond to the north are elevated plains inhabited by the Mazitu or Zulu races, who are as great a scourge to this part of Africa as the Jaggas, whose barbarity is recorded, no doubt with great exaggeration, in the Portuguese histories of Africa. (Qy. Are these Mazitu, Galla, &c., homœopathic diluents of the ferocious Jaggas?) This table land, extending for hundreds of miles, is what Indians call a *GHAUT*. Our traveller calls it the African Dekkan. The air was exhilarating to Europeans, but by no means agreeable to natives reared in the delta of the Zambesi. These elevations have their effect on the meteorology of Africa:—

“ The great source of the supply of moisture for South Africa is undoubtedly the Indian Ocean. The prevailing winds are from the east or south-east. Laden with moisture from this great reservoir, the air sweeps up the coast-ranges, and cooling in its passage over, deposits the chief portion of its aqueous vapour on the heights. Passing westwards, it is now the dry air that floats, during most of the year, as an east, or east-south-east wind, over the Kalahari Desert, and other arid plains. That this view is correct appears evident from the facts, that where no coast-range, or only a low one, exists, the central region is not so devoid of moisture as it is where, as in the case of the Drakensberg, the air must rise upwards of a mile in perpendicular height, before it can reach the plains beyond: and that whatever hills in the interior rise higher than those near the coast, their tops are covered with vegetation different from that on the plains below them, and requiring a more abundant supply of moisture. This is seen even on the hills close to the Kalahari Desert: and on other mountain-tops many species of ferns and some peppers flourish, which are never met with at lower altitudes.

“ As we approach near the Equator, the south-west winds from the Atlantic, robbed of their moisture by the western slopes, prevail for a

certain distance into the continent, and probably meet the south-easterly breezes from the Indian Ocean. Whether this meeting produces a greater amount of rainfall on the Line than elsewhere, as has been asserted, appears to require confirmation. Theoretically, the confluence of dry winds under the Equator, would be followed by an upward and overlapping motion of the currents to the north or south. But a hot, dry north wind is quite exceptional on the Kalahari Desert, and lasts usually but three days at a time. The chief supply for the South African rainfall comes from the Indian Ocean to the south-east, in the same way that at a later period of the year the south-west monsoon takes refreshing rains from the same great reservoir to the plains of India."—Pp. 530, 531.

In connexion with this subject we may give Dr. Livingstone's remarks on the geology of this part of Africa:—

"In attempting to decipher the testimony of the rocks in the Lake and other regions of Southern Africa, it had always been a sore puzzle, that few or none of the regular geological series, as described in books, could be made out. The absence of marine limestone, and the evidences of the oscillations of land and sea, which are so common in other countries, baffled our unaided inquiries. No chalk nor flints were ever met with. The nearest resemblance to the cretaceous strata, were immense flat masses of calcareous tufa, and this, from the impressions of reeds and leaves of the same kind as those now growing in the vicinity, was evidently a deposit from land springs, which formerly flowed much more copiously than at the present day. In association with these tufaceous deposits, ferruginous masses, with gravel embedded, were observed, having all the appearance of the same origin as the tufa. Coal was discovered in sandstone, and that had been disturbed only by the undulations of local igneous eruptions. It was only when our far-seeing and sagacious countryman, Sir Roderick I. Murchison, collected all the rays of light on the subject, from various sources, into the focus of his mind, that what we had before but dimly guessed, at length became apparent. Those great submarine depressions and elevations which have so largely affected Europe, Asia, and America, during the secondary, tertiary, and *quasi-modern* periods, have not affected Africa. In fact, Africa is the oldest continent in the world. 'It is unquestionably a grand type of a region which has preserved its ancient terrestrial conditions during a very long period, unaffected by any changes except those which are dependent on atmospheric and meteoric influences.'

"According to the present state of our knowledge, the Africans never had a stone period. The proof of this is merely negative, but of the same nature as the evidence that, while the stone period lasted, no bronze implements were in use. And it does seem a difficulty worth remarking, that while it is assumed that, in ancient times, stone for lengthened periods alone was in use, we have the evidence of the late Admiral Fitzroy (whose recent death—the result of over-fatigue in the

pursuit of his valuable researches—all so greatly lament), that the present time is the stone period in Tierra del Fuego and some countries whose inhabitants resemble our remote ancestors—and in other parts it is the age of iron.

“ It is possibly only a display of ignorance, but we trust it will not be imagined to be a proof of conceit, when some of the ideas, which beguiled our weary marches, are put forth as materials for thought in younger minds. Here at every third or fourth village, we see a kiln-looking structure, about six feet high, by two-and-a-half or three feet in diameter. It is a clay, fire-hardened furnace, for smelting iron. No flux is used, whether the specular iron, the yellow haematite, or magnetic iron ore is fused, and yet capital metal is produced. Native manufactured iron is so good, that the natives declare English iron to be ‘ rotten’ in comparison, and specimens of African hoes were pronounced at Birmingham to be nearly equal to the best Swedish iron. As we passed along, men sometimes ran from the fields they were working in, and offered for sale new hoes, axes, and spears of their own workmanship. It is certainly the iron age here; copper, according to the ideas of the natives who smelt it from malachite, is much more intractable than the metal from ironstone, which needs no flux; and as yet, so far as we can learn, neither tin nor zinc has ever been used to form an amalgam with copper in this country, so that we may expect the bronze age to come in an inverted order. Of the flint age as applied to Africa, we are compelled to doubt, because no flints, with the exception of a few small agates, are to be found in the southern parts of the continent we have examined. A stone period might have its course without flints, as other rocks might have been used, but the evidence must all be underground.”—Pp. 535—537.

On the 27th September, Dr. Livingstone was compelled to return by the sickness of his native attendant, want of food, and the fear of detaining the *Pioneer*, which was waiting for him in the Zambesi: he had reached his farthest point, about 70 miles west of the lake—already he had received his letters of recall from Earl Russell—one wistful glance on the western plains which he was not permitted to explore, and he retraced his steps to the valley of the Zambesi.

In the intervals of their labours, in February, 1861, and in September, 1862, Dr. Livingstone employed himself in the examination of the Rovuma, which, unlike most African rivers, has a magnificent bay, and no bar at its entrance. The importance of this river arose from the fact of its being beyond the territory claimed by the Portuguese, and from its supposed connection with Lake Nyassa. It was explored 156 miles from its mouth, until the navigation was impeded by rocks and rapids. So far it is navigable eight months in the year: its valley is from two to four miles wide, bounded by high-

lands. We fear that its value as a highway to the interior is doubtful, but we shall hear more of it should Dr. Livingstone be spared to carry out his design of a further examination of the country as far as Lake Nyassa.

Whether the outlay of the few thousands incurred by these expeditions has been a loss to the country, uncompensated by any practical results, is a question which we think Dr. Livingstone answers satisfactorily.

"It may be useful to recount the more important results enumerated in the foregoing pages. Among the first, the discovery of a port which could easily be made available for commercial purposes, and of the exact value of the Zambesi as a speedy means of transit to that interior of highlands, which in all probability will yet become the sphere of European enterprise. The condition in which the river will be found at its lowest has been carefully ascertained, and stated in the same way as the depth of harbours usually is, namely, at low water. However much higher the waters of the Zambesi and Shire may be found during several months of the year, they will never be found lower than what we have mentioned.

"The fertility of the soil has been amply proved by its productions. Indigo, for instance, has been found growing wild over large tracts of country, and often attains the height of a man. It has probably been introduced from India, but a species was found at Lake Nyassa equally tall, though it differs from that on the Zambesi in having straight instead of curved pods. In order to remove all doubt as to the value of the latter sort, Dr. Kirk extracted some of the colouring matter from the indigo growing wild at Shupanga, and it exhibited the peculiar coppery streak when a scratch was made on it, which is characteristic of the best article of commerce.

"The cotton collected from a great many districts of the country was found to be of very superior quality. Large spaces are so much impregnated with salt that an efflorescence of it appears all over the surface. In these spaces superior cotton flourishes with very little care. We saw some men who had been employed to take canoes down to the coast, sitting on the bank, on soil like this, cleaning and spinning their cotton. When we returned twelve months afterwards, the seeds thrown away had germinated, flourished, and yielded cotton wool, which, when sent to Manchester, was pronounced to be twopence per pound better in quality than common New Orleans; and not only is cotton produced of good quality, but it is persistent in the soil to an extent quite unknown in America. We have observed cotton-bushes yielding vigorously in parts where they had not only to struggle for existence against grass towering over their heads, but had for at least ten years to bear up against the fires which annually burnt down them and the grass together."—Pp. 585, 586.

"Our late investigations prove that the former statements as to the suitability of the climate and soil north of the 15° or 16° of south

latitude were very much within the truth. In fact, the region indicated is pre-eminently a cotton-field; crops never running any danger of being cut off by frost. The natives have paid a good deal of attention to the cultivation of the plant, and find that the best requires renewal only once in three years.

"No cotton-plants were observed in the middle of the country during Dr. Livingstone's journey across Africa, but our attention had since been so carefully directed to the subject that a single cotton-bush never escaped observation. We found that not only was the plant well known to the people of the interior, but that a variety not met with on either Coast was under cultivation inland. Thus, for instance, the Bazizulu living near the Kafue had a variety yielding cotton of very fine quality and long staple, which can only be described as of the Pernambuco kind; and at Sesheke the stem of a tree of this species had attained a diameter of eight inches, and was so tall that Dr. Kirk had to climb up it for specimens as one would up an apple-tree.

"Two other varieties were found cultivated over large tracts of country. The indigenous kind had nearly been superseded by a very superior sort called 'foreign cotton.' This had been introduced by the natives themselves; and the district included in the Shire Valley and shores adjacent to Lake Nyassa, in which it abounds, is about 400 miles in length, and may confidently be stated as one of the finest cotton-fields in the world. Cotton already cultivated there is superior to common American, and nearly equal to Egyptian. The favourable soil and climate render it probable that with skill in cultivation this country might be made to excel many others.

"In further illustration of the fertility of the soil, we found that those plants which require much care in the cultivation in other countries grow wild here as well as cotton. Tobacco, though a delicate plant, was frequently found growing self-sown. The *Ricinus communis*, or castor-oil plant, was met with everywhere under similar circumstances. In some parts indigo is known by the name of 'occupier of deserted gardens,' from its habit of springing up wherever it has a chance. Sugar-cane is not a self-planter, but it blossoms, and when cultivated in rich loam grows, without manure, as large as that which can only be reared by the help of guano in the Mauritius and Bourbon; and, from crystals at once appearing on the cut surfaces, seems to contain much sugar.

"In addition to these evidences of the richness of the soil, we have the face of the country in the lowlands covered with gigantic grasses; they tower over men's heads, and render hunting quite impossible. The inhabitants of Natal and of the Cape Colony will understand us perfectly, when we say that the low belt adjacent to the East Coast, from one to three hundred miles broad, is 'zour velt,' and well suited for cattle. In fact, the only fault that can be found with the soil is its over-luxuriance; and though Speke and Grant mention a very fertile zone near the equator, we cannot conceive that it exhibits greater fecundity than the districts between 10° and

15° south, otherwise it would be perfectly impassable. On the islands in the Shire crops are raised continuously, without any regard to the season, and, by irrigation, wheat during the four colder months. Europeans can always secure one crop of European corn and two or three of maize annually.

"On the highlands the natural grasses are less luxuriant, but the average crop is as heavy as could be obtained from rich meadow-land in England. This self-sown pasturage, which extends over hundreds of miles of grassy valley and open woodland, is the best in Africa. This was shown by the cattle, which were left almost in a wild state, becoming so fat and lazy that bulls allowed the boys to play with them, and to jump on their backs. We have seen cows feeding on grass alone become as heavy as prize beasts.

"In general no tsetse is found on the highlands to injure cattle, nor mosquitoes to annoy man."—Pp. 587—589.

One serious drawback is common to all Central Africa—viz., a liability to drought.

"It would not be fair, while giving the results of our inquiries, to keep out of view one serious drawback, which we believe is characteristic of every part of Central Africa. Periodical droughts must be expected. If a rainy zone exists under the equator, that is the only exception known. These droughts are always partial, but may prevail over areas of from one to three hundred miles in extent. Our inquiries led us to believe that from 10° to 15° south they may be looked for once in every ten or fifteen years, and from 15° to 20° south once in every five years. What the cause of them may be we cannot tell; but lack of vegetation cannot be assigned as any reason either for their occurrence or greater frequency now than at any former period. The hills are covered with trees and grass to their summits. The valleys are often encumbered with profuse and rank vegetation—but suddenly, and without any warning, the years of plenty are succeeded by one in which there is neither earring nor harvest. A shower has fallen on one spot a mile square: there the grass has sprung up, but has died off again. The rest of the country is parched and burnt; the grass of the preceding year, which may have escaped the annual fires, is discoloured and crumbles into powder in the hand; and the leaves of the trees, though alive, look withered. One who had seen the landscape in all its glorious freshness and verdure after rains, could scarcely believe that the brown and dusty world before him was ever green."—Pp. 589, 590.

For descriptions of scenery, natural productions, manners and customs of native tribes, and pictures of primitive tribal society, we must refer our readers to the elegant and well-illustrated volume which, to an intelligent mind, will far exceed in interest the most artistically-written novel. Coal and iron abound in all South-east Africa, which fact seems to in-

dicate a grand future. The climate, with the exception of the low, swampy portions of the coast, is generally healthy, and on the highlands is equal to any in the world. Dr. Livingstone remarks on tropical diseases, "Their prevention and remedies are worthy of being carefully studied by all who are expecting to tarry in tropical climates :" he thinks that the absence of all fear, and a firm trust in God's providence, together with constant mental and bodily activity, are the great preventatives of sickness, and admirably helps towards recovery from disease. This part of the world, favoured as it is by so many natural advantages, offers at present no inviting prospect, either to the visitor, the trader, or the colonist. Besides the unsettled condition of society, arising out of the imperfections and evils necessarily connected with the tribal state, in which small political communities are undergoing either a process of disintegration or of reunion, of which process wars and forays are the natural accompaniments ; the existence of Portuguese settlements, and assumption of territorial rights, and the patronage of slavery by the Portuguese authorities, seem to exclude, for this age at least, civilization, commerce, and Christianity from this otherwise favoured part of Africa.

In Europe PORTUGAL is one of the advancing Latin kingdoms. In Africa its power, such as it is, is only exercised for evil : the native tribes despise its authorities, and compel them to pay tribute for their forts and stations. The Landeens, a Zulu tribe, are masters of the right of the Zambesi ; and the Portuguese pay for permission to occupy portions here and there for trade or agriculture ; from Senna to Tette the ruins of stone houses destroyed by the natives prove the inability of the Portuguese Government to protect its subjects. All along the Zambesi, Portuguese traders must submit patiently to the insults and exactions of the tribes through whose boundaries they pass. Obviously, there is no *de facto* possession of the country, and yet, in the face of this non-existence of actual sovereignty, the Portuguese Government is allowed to claim 900 miles of the East Coast, and exclude the civilising and humanising influence of legitimate commerce, and of Christianity. It is said that the maintenance of this shadow of power costs the Portuguese Government £5,000 annually beyond the revenue raised. But we must sum up the indictment against Portuguese misrule in Africa in Dr. Livingstone's own words :—

" Here, on the East Coast, not a single native has been taught to read, not one branch of trade has been developed, and wherever Portu-

guese power, or rather intrigue, extends, we have that traffic in full force which may be said to reverse every law of Christ, and to defy the vengeance of Heaven."—P. 607.

The sin of countenancing slavery is not, however, confined to the Portuguese. About 19,000 slaves, chiefly taken from the regions around Lake Nyassa and the Valley of the Shire, pass annually through the custom-house at Zanzibar, one of the ports of our friend and ally, the Sultan of Muscat. How our agents, paid by the British Government, to check this trade, discharge their duty, may be seen in the intensely interesting narrative of a Journey in Arabia, by Mr. Palgrave, to which we trust, ere this, the attention of our Government has been directed ;—with what effect time will show.

The misery produced by the slave trade is the burden of Dr. Livingstone's book, and the painful effect on the mind is not lessened by the incidental occurrence of the damning facts. The whole structure of African society is disorganised by this "sum of all villanies." Warlike tribes furnished with fire-arms, and guided by Portuguese or Arab traders, are engaged in continual forays on their neighbours. A slave-hunting party of this sort is irresistible to the weaker tribes armed only with spears or arrows. The panic is universal ; to fly, or to yield with a pathetic lethargy, is all that can be done. The path of the slave hunter is traceable in burnt villages, ruined and neglected cultivation, and human bones. And these black men and women are human beings—our brothers and sisters. We cannot but grievously sin against Him who *stooped* to become man, if we turn carelessly from these abominable proceedings, and, disclaiming all responsibility, say, "*Am I my brother's keeper?*" Races, however trampled upon and degraded by oppression, exhibit feelings which illustrates our great dramatist's words,—

"One touch of nature makes the whole world akin."

"As we were sleeping one night outside a hut, but near enough to hear what was going on within, an anxious mother began to grind her corn about two o'clock in the morning. 'Ma,' inquired a little girl, 'why grind in the dark?' Mamma advised sleep, and administered material for a sweet dream to her darling, by saying, 'I grind meal to buy a cloth from the strangers, which will make you look a little lady.' An observer of these primitive races is struck continually with such little trivial touches of genuine human nature."—P. 145.

The extent of the slave hunting is much greater than was supposed. Within the last few years the barbarian AJAWA

have desolated the country around Lake Shire, and are yet in full activity, unchecked by any human power. Dr. Livingstone's plan for the remedying of the evil appears to us feasible.

"The trade of Cazembe and Katanga's country, and of other parts of the interior, crosses Nyassa and the Shire, on its way to the Arab port, Kilwa, and the Portuguese ports of Iboe and Mosambique. At present, slaves, ivory, malachite, and copper ornaments, are the only articles of commerce. According to information collected by Colonel Rigby at Zanzibar, and from other sources, nearly all the slaves shipped from the above-mentioned ports came from the Nyassa district. By means of a small steamer, purchasing the ivory of the Lake and River above the cataracts, which together have a short line of at least 600 miles, the slave trade in this quarter would be rendered unprofitable,—for it is only by the ivory being carried by the slaves, that the latter do not eat up all the profits of a trip. An influence would be exerted over an enormous area of country, for the Mazitu about the north end of the Lake will not allow slave-traders to pass round that way through their country. They would be most efficient allies to the English, and might themselves be benefitted by more intercourse. As things are now, the native traders in ivory and malachite have to submit to heavy exactions; and if we could give them the same prices which they at present get after carrying their merchandise 300 miles beyond this to the Coast, it might induce them to return without going further. It is only by cutting off the supplies in the interior, that we can crush the slave trade on the Coast. The plan proposed would stop the slave trade from the Zambesi on one side and Kilwa on the other; and would leave, beyond this tract, only the Portuguese port of Inhambane on the south, and a portion of the Sultan of Zanzibar's dominion on the north, for our cruisers to look after. The Lake people grow abundance of cotton for their own consumption, and can sell it for a penny a pound, or even less. Water-carriage exists by the Shire and Zambesi all the way to England, with the single exception of a portage of about thirty-five miles past the Murchison Cataracts, along which a road of less than forty miles could be made at a trifling expense: and it seems feasible that a legitimate and thriving trade might, in a short time, take the place of the present unlawful traffic.

"Colonel Rigby, Captains Wilson, Oldfield, and Chapman, and all the most intelligent officers on the Coast, were unanimous in the belief, that one small vessel on the Lake would have decidedly more influence, and do more good in suppressing the slave trade, than half a dozen men-of-war on the ocean. By judicious operations, therefore, on a small scale inland, little expense would be incurred, and the English slave-trade policy on the east would have the same fair chance of success, as on the West Coast."—Pp. 128, 129.

Dr. Livingstone, though a linguist, has not had the leisure requisite for philological pursuits; he seems to make himself

understood wherever he goes, and hence we infer that most of the dialects spoken on the Zambesi and its affluents belong to the Kaffir and Sechuana family, especially as many of the words incidentally quoted are evidently of that class. We think that Dr. Livingstone exaggerates the copiousness of their dialects, just as the Spanish priests and German savans were mystified by the abstract terms which they imagined they had found in the language of the semi-savages of Mexico, whereas they had simply discovered the possibility of forming abstract terms from concrete, which would be readily understood by the natives, as is the case in Kaffirland. The fact is, that many of the dialects of uncivilised tribes possess a remarkable flexibility, an indefinite expansiveness as to new words and phrases. By means of affixes and prefixes, and by the introduction of portions of pronouns and of particles, shades of meaning are hit off in a moment, in words which perhaps in that exact shape were never used before, but which a native at once comprehends. We may illustrate our meaning by a reference to a colloquy we once overheard between a mother and daughter, "Lalla, be quick." "I am *be quick-ing*, mama." This new compound was expressive enough, and understood at once, but it is not likely to be inserted in an English lexicon. Forms of speech far more unusual may be used by African or Aztec orators without being guilty of violating the grammar and idiom of their mother tongues.

We now turn to the missionary portion of this excellent work. Our readers are aware that, influenced by the representation of Dr. Livingstone, the London Society despatched a party of missionaries to the Makololo, and that these worthy men and women perished of fever in the low swampy regions around Linyanti, on their way to the highlands near the Falls, which was the intended place of settlement. The establishment of this mission might have formed a rallying point for the tribe on the death of Sekeletu, and thus have preserved one of the noblest of the African races: and, from this healthy site and admirable position, would, no doubt, have exercised a commanding influence over that portion of Eastern Africa. So we think, and lament over what seems to us the mysteriousness of the dispensation which has blighted all our hopes. It becomes us to say with the Psalmist, "*I was dumb, I opened not my mouth; because thou didst it*" (Psalm xxxix. 9). These servants of Christ have not perished in vain; their graves are our *seizin* of the land of which they had taken possession spiritually in the name of Him who is "King of kings, and Lord of lords."

"We had ascertained at the Falls the sad fate of the missionaries of the London Society. Our friend from Natal, Mr. Baldwin, had found them at a well in the desert suffering from hunger; they had no horses, without which game there cannot easily be procured. They had failed to kill the rhinoceroses which came to the water at night; Mr. Baldwin kindly shot a couple of animals for them; but was apprehensive when he left them, that they would hardly live to see the Makololo country. They did reach Linyanti, however, though in that exhausted state on which the fever of the country is sure to fasten. The severe drought of that year had dried up the great marshes around the village, and rendered fever more than usually virulent. Aware, from Dr. Livingstone's description, of the extreme unhealthiness of the place, Mr. Helmore, who seems soon to have gained the people's confidence, told the Chief that he could not remain in that locality, but wished to go on to a higher and more healthy part, north-east of the Falls. Sekeletu said that he offered to take him to Sesheke to see if he liked that better than Linyanti. 'You will take me also,' said Mr. Helmore, 'to see Mosi-oa-tunya,' the picture of which, in 'Missionary Travels,' was readily recognised; but, while they were getting ready for the journey, the wagon-drivers were seized with fever; Mrs. Helmore was the first white person who fell a victim to the fatal malady. The devoted missionary then told the people that, although his wife had died, he did not mean to leave them, but would remain and do his duty. Notwithstanding the hunger, toil, and exhaustion, consequent on the long journey through the desert, and this heavy affliction at Linyanti, the good man, already knowing the native language, at once commenced the work of preaching the Gospel. We heard some young men at Sesheke sing the hymns he had taught them. All liked and spoke kindly of him; and his death was generally regretted. It is probable that he would soon have exerted a powerful and happy influence over the tribe; but in a month he was cut down by fever. Our information was derived entirely from the natives of the different tribes, which now form the Makololo. They are generally truthful, unless they have some self-interest at stake; and they cannot be made to combine to propagate any downright falsehood. Taking their statements as probably true, the whole party consisted of twenty-two persons, of whom nine were Europeans, and thirteen people of colour; of these five Europeans and four natives perished by fever in less than three months. The missionary associate of Helmore was then left in a somewhat trying position. Four out of the nine Europeans had succumbed to the disease, and his own wife was lying ill, and soon to be the fifth victim. He had been but a short time in Africa, his knowledge of the native language was of course limited, his influence small, and he had no experience; accordingly he took the wise course of leaving the country; his wife died before he reached the healthy desert. The native servants from the south, who had never seen the fever in their own country, thought that the party had been poisoned by the Makololo; but, although they are heathens, and have little regard for human

life, they are not quite so bad as that. The spear, and not poison, is their weapon. There is no occasion for suspecting other poison than malaria, that being more than enough. We have witnessed all the symptoms of this poison scores of times, and, from the survivors' description, believe the deaths to have been caused by severe African fever, and nothing else. We much regretted that, though we were on the same river lower down, we were not aware of their being at Linyanti till too late to render the medical aid they so much needed. It is undoubtedly advisable that every Mission should have a medical man as an essential part of its staff."—Pp. 278—280.

— Another mission, that of the OXFORD and CAMBRIDGE UNIVERSITIES, originated in the general interest excited by the discoveries of Dr. Livingstone, and its history is in some measure mixed up with his subsequent explorations. Under the auspices of the eloquent Bishop of Oxford, the society was formed for the purpose of establishing a mission in Central Africa. It was calculated that, although a large outlay would be required for the outfit, building, and other necessary requirements of a new settlement, the mission once fairly afloat would, in a moderately brief period, become self-supporting. The directors had the advantage of the experience of modern missionary societies, extending over three-fourths of a century, and much of it bearing upon fields of labour similar to that upon which they were entering; they had not been unobservant of the mistakes and failures of many of these enterprises of Christian philanthropy, which are not attempted to be concealed in the reports of missionary societies, or in the journals of missionaries; but are, on the contrary, as patent to all readers as the more pleasing narrative of missionary successes. The opinions of Dr. Livingstone, which were first made known to the world in the *British Quarterly Review*, August, 1851, had, no doubt, due influence with them. In the article referred to (which has not perhaps received the consideration it deserves from the parties most interested) the Doctor, himself a practical missionary, contends that the work of evangelisation, so far as missionary societies are concerned, is already complete in the Cape Colony, and among many of the border tribes, and that it is the duty of the missionaries to leave the infant churches to the care of a native pastorate, and to press onward; and further, that this mode of procedure is the condition of future success. He considers the practice of our missionary societies, in maintaining a European or native pastorate over native churches, to be calculated to foster a reliance upon religious endowments; and that the habit of depending upon the

presence of European teachers for the supply of their spiritual wants, places the native churches in the position of a people in perpetual leading strings. Of these views, we shall have something to say in due course. Whatever may be their excellencies or their defects, they certainly were adopted by many of the advocates of the new society. It was obvious that the directors had come to the conclusion, that modern missionary efforts had somewhat declined from the heroic spirit which had characterised their beginning—that there was a tendency in missionaries to content themselves with a native pastorate, instead of, like Titus, first setting “*in order the things that are wanting*,” and then, after “*ordaining elders in every city*,” proceeding to the regions beyond; that the attractions of colonial comfort and of European society had damaged the zeal of many who had set out with the motto, “The world is my parish,” and had finished by being unwilling to move beyond the confines of civilized life. With such convictions, it was the grand object of these excellent men to attempt a revival of the heroic and self-sacrificing character of ancient missions, and thus to show to the too prudent, timorous, and all but pusillanimous churches, “*a more excellent way!*” Now that the experiment has been made, we have briefly to record its history—and its failure; a failure which occurs in all first experiments in the difficult task of carrying out sound principles to practical results; a failure admonitory to the too sanguine, and, at the same time, rich in valuable experiences for future actions, and therefore the herald of final success. But, while thus expressing our sympathy with the general plan and principles of the Universities’ Mission, we must take exception to what with propriety may be termed the exaggerated and disproportioned truths, which, in connection with some really important remarks, are exhibited in the article in the *British Quarterly Review*. It is obvious that European missionaries were never intended permanently to occupy the pastorate over native churches; the available resources of Britain could not supply the men or the means for the pastorate of a fraction of the world. The permanent oversight of mission churches must be in the hands of a native ministry. But, on the other hand, to leave native churches at once entirely to themselves must appear to be the wildest of all proposals, considering the long degradation of the native intellect, and the deep-seated influence of the old habits of heathendom, which require to be watched and combatted even among the best of the native converts. The apostles and other first teachers of Christianity

laboured mainly among a refined and civilised society, and yet for several generations the leading pastors of the churches in Italy and Southern Gaul were of Hellenistic origin. We believe that while all native churches should at once be placed under a native pastorate, and while, by degrees, the number of the European ministry should be lessened, some exercise of European oversight will be necessary for generations to come. Every missionary society is meanwhile endeavouring to act on this principle of gradual withdrawal of European agency, but feels the necessity of making haste slowly. And we may remark, with reference to a large class of European missionaries engaged in the practical exercise of a *de facto* episcopate over native teachers and churches, whether in our colonies, or within reach of them, where no special sacrifice of comfort or of society is called for; that the trials and exercises of mind, arising out of the perpetual struggle to maintain Gospel purity and carry on intellectual progress among native races, thrown into intimate contact with our luxuriance and demoralising civilisation, can only be known by those who have experienced them. Let not the army which keeps to the tented field boast over the troops left in garrison to secure the conquered territory, since the labours of both are equally necessary to the success of the cause in which they are engaged. While, however, our missionary societies are by degrees bringing up these infant, and, as yet imperfect, churches towards a higher maturity of Christian life, it would ill become them to neglect the other class of missions, to the success of which they are in a great measure indebted for their influence over public mind. Men's hearts burn within them when they think of the Moravians in Greenland, of the first missionaries of the London Society in Polynesia and Madagascar, of the Baptist in Burmah, and of the Wesleyan Society in Tonga and Fiji. These belong to the heroic class of missions, than which none have been more honoured of God; and the Christian church must continue to engage in similar missions, involving a like sacrifice of comfort and risk of life, if it is to secure the approval of the great Head of the Church, and keep its hold upon the hearts of His people. We trust that the time is at hand, when, relieved from the burden of the sustentation of the older missions, the various societies will be enabled to concentrate all their resources of men and means upon the centres of the world's population in India, China, and Africa, "*where Satan's seat is.*"

Bishop Mackenzie and his party arrived in the Zambesi early in 1861, but were not settled at Magomero in the

Manganja country, the site chosen for the station, until August. This place was nearly equi-distant from the Shire and the Lake Shirwa, and was chosen with an expectation that the Rovuna, and not the Shire and Zambesi, would eventually become the great highway from the mission to the sea. Before the station was formed the mission was brought in collision with slave-traders and the barbarous AJAWA tribes, who are rapidly encroaching upon the Manganja country. Much blame has been cast upon the Bishop by good men at home, for his extempore and improvised action under the powerful promptings of humanity; though it is difficult to imagine how he could possibly have avoided the painful responsibility of doing himself what he and all the anti-slavery party are day by day exhorting the English Government to do. In endeavouring to rescue two of his people from a slave gang, the excellent Bishop caught the fever which terminated his life 31st January, 1862, and that of his companion, Mr. Burrup, 23rd February, 1862, under circumstances of a peculiarly trying character; at the very time Miss Mackenzie and Mrs. Burrup entered the river to join the mission. Some months after the Bishop's death the site of the mission was moved to Chibisa's place, near the cataracts of the Shire; and, on the arrival of the new Bishop Tozer, it was abandoned; so far as the Zambesi territory is concerned. We give the narrative of this most unsatisfactory proceeding in Dr. Livingstone's own words:

"About the middle of December, 1863, we were informed that Bishop Mackenzie's successor, after spending a few months on the top of a mountain about as high as Ben Nevis in Scotland, at the mouth of the Shire, where there were few or no people to be taught, had determined to leave the country. This unfortunate decision was communicated to us at the same time that six of the boys reared by Bishop Mackenzie were sent back into heathenism. The boys were taken to a place about seven miles from the ship, but immediately found their way up to us, lamenting that they had no longer that Bishop who had a heart, and who was more than a father to them. We told them that if they wished to remain in the country they had better so arrange at once, for we were soon to leave. The sequel will show their choice.

"As soon as the death of Bishop Mackenzie was known at the Cape, Dr. Gray, the excellent Bishop there, proceeded at once to England, with a view of securing an early appointment of another head to the Mission, which in its origin owed so much to his zeal for the spread of the Gospel among the heathen, and whose interests he had continually at heart. About the middle of 1862 we heard that Dr. Gray's efforts

had been successful, and that another clergyman would soon take the place of our departed friend. This pleasing intelligence was exceedingly cheering to the Missionaries, and gratifying also to the members of the Expedition. About the beginning of 1863 the new Bishop arrived at the mouth of the river in a man-of-war, and after some delay proceeded inland. The Bishop of the Cape had taken a voyage home at considerable inconvenience to himself, for the sole object of promoting this Mission to the heathen ; and it was somehow expected that the man he would secure would be an image of himself ; and we must say, that whatever others, from the representations that have gone abroad, may think of his character, we invariably found Dr. Gray to be a true, warm-hearted promoter of the welfare of his fellow-men ; a man whose courage and zeal have provoked very many to good works.

" It was hoped that the presence of a new head to the Mission would infuse new energy and life into the small band of Missionaries, whose ranks had been thinned by death ; and who, though discouraged by the disasters which the slave war and famine had induced, and also dispirited by the depressing influences of a low and unhealthy position in the swampy Shire Valley, were yet bravely holding out till the much-needed moral and material aid should arrive.

" These expectations, we regret to say, were not fulfilled. We would here be understood as expressing only a general opinion. The qualities required in a Missionary leader are not of the common kind. He ought to have physical and moral courage of the highest order, and a considerable amount of cultivation and energy, balanced by patient determination ; and above all these are necessary a calm Christian zeal and anxiety for the main spiritual results of the work. We repeat, that we are expressing no opinion about the qualification of any individual ; but we assert that not every one has this rare combination of power ; and that a man who may be quite in his natural sphere in a quiet round of common duties as the minister of a town, or rural parish in England, may be very much out of it as a Missionary in Central Africa.

" We believe that we are uttering the sentiment of many devout members of different sections of Christians, when we say, it was a pity that the Mission of the Universities was abandoned. The ground had been consecrated in the truest sense by the lives of those brave men who first occupied it. In bare justice to Bishop Mackenzie, who was the first to fall, it must be said, that the repudiation of all he had done, and the sudden abandonment of all that had cost so much life and money to secure, was a serious line of conduct for one so unversed in Missionary operations as his successor, to inaugurate. It would have been no more than fair that Bishop Tozer, before winding up the affairs of the Mission, should actually have examined the highlands of the Upper Shire ; he would thus have gratified the associates of his predecessor, who believed that the highlands had never had a fair trial, and he would have gained from personal observation a more accurate knowledge of the country and the people than he could possibly have become

possessed of by information gathered chiefly on the coast. With this examination, rather than with a stay of a few months on the humid, dripping top of misty Morambala, we should have felt much more satisfied.

"To those who have not paid much attention to the labours of different bodies of Christians it may be mentioned, that, before success appeared at the Mission-stations on the West Coast, upwards of forty Missionaries had succumbed to the climate. Let it be said, if you will, that the Societies and the men were alike unwise to sacrifice so much valuable life. These may be proofs of folly to some, but to others they are telling evidence that our religion has lost none of its pristine power. Nothing in our opinion is wanting to complete the title of many of these men to take rank with the Saints and Martyrs of primitive times. More experience of the climate has since greatly diminished the mortality, and in 1861 there were, on the West Coast, one hundred and ten principal Mission-stations, thirteen thousand scholars in the schools, and nineteen thousand members in the churches.

"Bishop Mackenzie had in a short time gained the first step, he had secured the confidence of the people. This step it often takes several years to attain; and we cannot but regret that subsequently the Mission of the Universities, when contrasted with others, should appear to so much disadvantage. In fact, though representing all that is brave and good and manly, in the chief seats of English learning, the Mission, in fleeing from Morambala to an island in the Indian Ocean, acted as St. Augustine would have done, had he located himself on one of the Channel Islands, when sent to christianize the natives of Central England. This is, we believe, the first case of a Protestant Mission having been abandoned without being driven away."—Pp. 571—574.

With the regrets of Dr. Livingstone that the Mission was abandoned before the highlands of the Upper Shire had been tried, we fully sympathise. So far as we can judge from our present light, the future success of missionary labours in the interior of Africa, far from European colonies, depends upon the establishment of well organised and efficiently manned stations on the healthy table-lands on each side of that vast continent, where Europeans can exist with some likelihood of life and comfort. A mission of this sort, purposing to penetrate into the heart of heathendom, conducted by men of education and mark, had awakened an interest among the educated classes in our universities. Here indeed was a fair field found for testing the energies of what has been called "muscular Christianity,"—a sort of Christianity not to be despised as it regards the labours described by Dr. Livingstone in this volume, who, on his return from the Shire highlands, felt "the muscles of the limbs" to be "as hard as boards, and not an ounce of fat on any part of the body." The novelty

and daring of the plan was taking hold of the imaginations and hearts of influential sections of society, which had hitherto been for the most part coldly indifferent to the moral grandeur of the mission work. Most of the existent missions in Africa have their point of departure and their base of operations in a European colony, bordering upon the field which they occupy; an advantage which is accompanied by a serious drawback inseparably connected with it. It is in the nature of things impossible for a European colony and an indigenous African civilisation to exist side by side in the same country; the more advanced condition of society naturally dwarfing and destroying the other. Missions bordering upon colonies, however successful they may be in the great work of conversion and education, have no opportunity of bringing the moral and intellectual power of Christianity to bear upon a purely African society. Long before the little leaven has had time to work upon the mind of the native, the rapid wave of colonisation changes everything, and subjects the unprepared native races to the temptations which experience has proved to be always destructive to them. All the laws and customs of native society become obsolete by degrees, though many of them are far better adapted to the conditions in which natives are likely to exist for generations to come, than the laws and institutions of European colonists whose civilisation is the rich heritage of thousands of years. Brought in competition with Europeans, so far in advance already, the native feels himself distanced in the race before it has commenced, and too frequently gives up the attempt. Under the most favourable auspices he can but become a dark-skinned imitation of an Englishman, and can seldom rise, in the new state of things, to a position much higher than that of being the servant of his European brethren: legally, it is true, he is their equal, but yet separated socially by the barrier of colour and race. All this may be otherwise at some future period, but for the present our anticipations as to the temporal future of the native races in and around European colonies, are not of the most cheering character; though we do rejoice that so many of them are being trained for heaven. With these convictions, we desire above all things to see a mission established on those Eastern Ghauts, of which Dr. Livingstone speaks, sufficiently strong to protect itself against slave traders and marauders; attracting to itself the friendship and confidence of the neighbouring tribes, operating upon native society, Christianising, not destroying, native institutions, and renovating native life. In such a mission, composed of half a

dozen missionaries and their families, and of a like number of European artizans, and furnished with a suitable medical staff, the cheerless isolation of educated men and women, so injurious to the health and spirits, would be avoided : the work of education and translation and printing, the training of schoolmasters and of a native ministry, could be leisurely carried on. In a few years the influence of such an establishment would be felt for hundreds of miles around it ; and, except by such a class of instrumentalities, we do not see how Christianity is to be introduced into the populous regions from the Zambesi to the sources of the Nile, or into the central kingdom of Balonda, &c. The cost of such a machinery, if we may so call it, would no doubt be very great, especially its first establishment. The annual cost of the support of so many families, including the expense of maintaining communication with the civilised world, and the conveyance of supplies requisite for European habits and tastes, could not be less than £15,000 a year, perhaps more. The notion of self-support for such a missionary settlement is out of the question. No doubt sufficient quantities of native food might be raised, both animal and vegetable, in due time, by native labour ; but these things are small items in the cost of mission stations, and their value is more than consumed tenfold in the rough hospitality which missionaries find it not only necessary but also politic to exercise. The carrying on any trade or manufacture for the benefit of the mission is highly objectionable. It would be the natural result of the mission to develop the resources and foster the industry of the land, and Kadi traders, European as well as native, would be attracted to a spot where security could be ensured. But no one connected with the mission as its recognised agents, whether clergy or laymen, should be allowed to engage in pursuits which have gain for their object, and thus become the competitors of traders. It may be asked, are we never then to expect missions in purely heathen countries to become self-supporting ? Not so far as the European missionaries are concerned, is our answer. Self-support of the native agency, on a native scale, and of the various educational institutions raised by native agency operating upon its own nation, we have a right to look for in due time ; and when such an agency has been perfected and fully adapted to do its work, then, and only then, can our European missionaries be withdrawn.

We have thus endeavoured to dispel all notions so popular among some good people of a *cheap* mission. The great point is not cheapness but efficiency ; which in the end gives the

greatest results for our money. The great Head of the Church has purposely made every enterprise of a loving philanthropy costly and difficult, in order no doubt to test the sincerity of our *tongue* sympathy, and at the same time give a healthy direction and free employment to all our active powers. "Not because I desire a gift; but I desire fruit that may abound to your account" (Phil. iv. 17), is a text which contains the philosophy that underlies the necessity of missionary outlay. A mission such as we have described, if planted on the table-lands of the Makololo, near the Victoria Falls, would command the central plateau of the valley of the Zambesi in due time. Another on the highlands west of Lake Nyassa, would open the way to the Cazembe and the Balonda country; and we see no insuperable difficulty in the establishment of another among the populous tribes near the Lakes Nzigi and Victoria, the recently discovered sources of the Nile. These regions are no longer inaccessible. The time and cost required to maintain regular communication, great at first, would gradually diminish, as the mission would become the centre of trade, an emporium for the Continent. Such were the ancient priestly establishments of Paganism, the ruins of which are yet met with in Asia Minor and North Africa, and we see no reason why the higher cultivation and purer light of Christianity should not accomplish all that Paganism did and failed to do. This heroic enterprise properly falls to the lot of the Universities of the United Kingdom; they can furnish men, the best blood of the land, highly educated and refined, and yet manly and muscular Christians; for such are best calculated to sustain hardships, and impress favourably by their presence natives who look with peculiar respect upon a man who, like the son of Kish, is "*higher than any of the people from his shoulders and upwards*" (1 Sam. x. 23). We hope the Universities' Mission will not be permitted to dwindle into a mere branch of a Colonial Mission, but will be revived under a leader like the noble and self-denying Mackenzie, who, short as his career was, neither lived nor died in vain.

The older missionary societies are embarrassed with work on their hands, beyond their means to accomplish satisfactorily. The requirements of some, even of the most matured missions, seem to grow with the increase of the churches and school establishments, even where the most stringent economy has been exercised, and the largest amounts are raised towards self-support. Missionary secretaries and committees have discovered that while to establish a mission was a very expensive matter, the supporting of a successful one, so as to

enable it to follow up its success and maintain its vantage ground, entails a yet greater outlay. Hence the difficulties of the leading missionary societies are the result of the results which have followed their labours; and with these difficulties arising out of an increasing expenditure and stationary income, they have more than enough to do to maintain their position. This being the case, the honour of establishing missions in Central Africa must be left to the Universities' Missionary Society. May it go on and prosper.

While on the subject of missions, we may remind our readers of the assertions of Captain Burton and others as to the excellency and success of Mahomedanism in Eastern and Western Africa. Dr. Livingstone, a personal witness, gives a very different testimony:—

“From boyhood upwards we have been accustomed, from time to time, to read in books of travels about the great advances annually made by Mohammedanism in Africa. The rate at which this religion spreads was said to be so rapid, that in after days, in our own pretty extensive travels, we have constantly been on the look-out for the advancing wave from North to South, which, it was prophesied, would soon reduce the entire continent to the faith of the false prophet. The only foundation that we can discover for the assertions referred to, and for others of more recent date, is the fact that in a remote corner of North-Western Africa the Fulahs, and Mandingoës, and some others in Northern Africa, as mentioned by Dr. Barth, have made conquests of territory; but even they care so very little for the extension of their faith, that after conquest no pains whatever are taken to indoctrinate the adults of the tribe. This is in exact accordance with the impression we have received from our intercourse with Mohammedans and Christians. The followers of Christ alone are anxious to propagate their faith. A *quasi* philanthropist would certainly never need to recommend the followers of Islam, whom we have met, to restrain their benevolence by preaching that ‘Charity should begin at home.’

“Though Selele and his companions were bound to their masters by domestic ties, the only new idea they had imbibed from Mohammedanism was, that it would be wrong to eat meat killed by other people. They thought it would be ‘unlucky.’ Just as the inhabitants of Kolo-beng, before being taught the requirements of Christianity, refrained from hoeing their gardens on Sundays, lest they should reap an unlucky crop. So far as we could learn, no efforts had been made to convert the natives, though these two Arabs, and about a dozen half-castes, had been in the country for many years; and judging from our experience with a dozen Mohammedans in our employ at high wages for sixteen months, the Africans would be the better men in proportion

as they retained their native faith. This may appear only a harsh judgment from a mind imbued with Christian prejudices; but without any pretension to that impartiality, which leaves it doubtful to which side the affections lean, the truth may be fairly stated by one who viewed all Mohammedans and Africans with the sincerest good will.

"Our twelve Mohammedans from Johanna were the least open of any of our party to impression from kindness. A marked difference in general conduct was apparent. The Makololo, and other natives of the country, whom we had with us, invariably shared with each other the food they had cooked, but the Johanna men partook of their meals at a distance. This, at first, we attributed to their Moslem prejudices; but when they saw the cooking process of the others nearly complete, they came, sat beside them, and ate the portion offered without ever remembering to return the compliment when their own turn came to be generous. The Makololo and the others grumbled at their greediness, yet always followed the common custom of Africans of sharing their food with all who sit around them. What vexed us most in the Johanna men was their indifference to the welfare of each other. Once, when they were all coming to the ship after sleeping ashore, one of them walked into the water with the intention of swimming off to the boat, and while yet hardly up to his knees was seized by a horrid crocodile and dragged under; the poor fellow gave a shriek, and held up his hand for aid, but none of his countrymen stirred to his assistance, and he was never seen again. On asking his brother-in-law why he did not help him, he replied, 'Well, no one told him to go into the water. It was his own fault that he was killed.' The Makololo on the other hand rescued a woman at Senna by entering the water, and taking her out of the crocodile's mouth.

"It is not assumed that their religion had much to do in the matter. Many Mohammedans might contrast favourably with indifferent Christians; but, so far as our experience in East Africa goes, the moral tone of the follower of Mahomed is pitched at a lower key than that of the untutored African. The ancient zeal for propagating the tenets of the Koran has evaporated, and been replaced by the most intense selfishness and grossest sensuality. The only known efforts made by Mohammedans, namely those in the North-West and North of the continent, are so linked with the acquisition of power and plunder, as not to deserve the name of religious propagandism; and the only religion that now makes proselytes is that of Jesus Christ. To those who are capable of taking a comprehensive view of this subject, nothing can be adduced of more telling significance than the well-attested fact, that while the Mohammedans, Fulahs, and others towards Central Africa, make a few proselytes by a process which gratifies their own covetousness, three small sections of the Christian converts, the Africans in the South, in the West Indies, and on the West Coast of Africa actually contribute for the support and spread of their reli-

gion upwards of 15,000*l.* annually. That religion which so far overcomes the selfishness of the human heart must be Divine."—Pp. 513—516.

In conclusion, we hope this valuable work will be extensively circulated and read. It abounds in facts and remarks "highly suggestive," as the phrase is. That the author may be spared to finish the task he has undertaken, and to return in safety to his native land, is the earnest prayer of all who feel an interest in the progress of geographical discovery, or in the success of Christian missions.

ART. IV.—1. *Observations on the Natural History of Bees.*
By FRANCIS HUBER. Cupar. 1840.

2. *The Honey Bee; its Natural History, Physiology, and Management.* By EDWARD BEVAN, M.D. Fifth Edition. London. 1838.

3. *A Practical Treatise on the Hive and Honey Bee.* By L. L. LANGSTROTH. Third Edition. New York. 1863.

4. *Mysteries of Bee-keeping Explained.* By M. QUINBY. Ninth Edition. New York. 1865.

5. *On a True Parthenogenesis in Moths and Bees.* By CARL THEODORE VON SIEBOLD. Translated by WM. S. DALLAS, F.L.S. London. 1857.

6. *My Bee Book.* By WM. CHARLES COTTON, M.A. London. 1842.

7. *Humanity to Honey Bees.* By THOMAS NUTT. Wisbeach. 1835.

8. *The Practical Bee-master.* By J. KEYS. London. 1780.

9. *The Ancient Bee-master's Farewell.* By J. KEYS. 1796.

10. *Philosophical Transactions of the Royal Society of London for the Year 1792. Observations on Bees.* By JOHN HUNTER, F.R.S.

11. *The English Bee-keeper.* By A COUNTRY CURATE. London. 1851.

12. *The Apiary; or Bees, Bee-hives, and Bee Culture.* By ALFRED NEIGHBOUR. London. 1865.

13. *The Italian Alp-Bee; or, The Gold Mine of Husbandry.* By H. C. HERMANN. London: Neighbour. 1860.

14. *Bee-keeping for the Many.* Fifth Edition. London.

15. *Journal of Horticulture.* 1859 to 1865.

PERHAPS there is no "common object of the country" more familiar than a bee-hive. The mere name calls up the image of some rustic cottage, the walls half-hidden by climbing roses, the little garden fragrant with clove-pinks and lavender, and the air musical with the hum of bees. No one can have kept these little creatures for any length of time without placing them first on his list of favourites, and speaking of them with enthusiasm. There is so much of interest in their proceedings, and something so marvellous in the results which they accomplish, and there is so much still to be learned, notwithstanding that for centuries they have been closely observed,

and made the subjects of almost endless experiments. Even for those who adhere to the old plan of bee-keeping, and do not care to meddle and manipulate, the row of familiar dome-shaped hives will create abundant interest, and the more so if their owner happens to be a man of taste and refinement. "Did any one," asks Leigh Hunt, "ever sufficiently admire the *entire elegance* of the habits and pursuits of bees, their extraction of nothing but the quintessence of the flowers; their preference of those that have the finest and least adulterated odour; their avoidance of everything squalid; their eager ejection or exclusion of it from the hive, as in the instance of the carcases of intruders, which, if they cannot drag away, they cover up and entomb; their love of clear, quiet, and delicate neighbourhoods, thymy places with brooks; their singularly clean management of so liquid and adhesive a thing as honey, from which they issue forth to their work as if they had had nothing to do with it; their combination with honey-making of the elegant manufacture of wax, of which they make their apartments, and which is used by mankind for none but patrician or other choice purposes; their orderly policy, their delight in sunshine, their attention to one another, and their apparent indifference to anything purely regarding themselves apart from the common good?" There are, however, more solid grounds for our admiration, and to these we intend to apply ourselves in the following paper.

If we stand beside a hive in full flight, we are struck not only with the bustle, but with the amount of systematic and downright hard work that is being done. There is not the indefinite, wayward, and leisurely manner of the house fly, for example; nor the supercilious air of that elegant dandy the wasp. There is no loitering, no hovering about the hive, but the bees who leave fly straight away, and those who return, make at once for the entrance. A close inspection shows that most of those who arrive have the two hinder legs loaded with pellets differing in colour in different individuals. In some it is light yellow, in others orange, in others again, quite brown, while a few not only carry such loads, but are dusted all over the body with powder of the same colour. So heavy are these burdens of pollen that in many cases the bee just drops on the alighting-board, and there remains so exhausted that it has to rest and gather strength before it can enter. A few drop short of the landing-place, and fall to the ground, where, if the soil be dry and not too cold, they recruit in a minute or two, and fly up to the hive; but, should the ground

be wet, or a sharp wind blowing, they are quickly benumbed, and perish. The great majority, however, make good their landing, and run forward with an important air, and an impatience of the slightest obstruction which says plainly that the queen's business requires haste. Provided the weather is warm, and the sun shining, this goes on throughout the day; two never-ending streams going out and returning. Standing with the hive in profile, the swiftness and straightness of the outward flight is as though the hive were a piece of mimic ordnance, and the bees in succession were being violently shot out of it. The action is the same in all cases. The little creature walks, or rather runs, to the entrance, and the moment that is cleared, springs right forward and away. The *whirr, whirr, whirr*, of these swift departures never ceases, and can be heard quite distinctly above the ordinary hum of the hive. The bustle is greatest in the beginning of summer, when the population is at its best.

In the early spring, say the middle of March, a hive will contain from 5,000 to 20,000 bees, according as it has passed ill or well through the winter. But by the end of May the population should be 40,000 or 50,000 strong, or even more. The arrivals at that time will average sixty to the minute, with an equal number of departures. The interest to the observer is, of course, much increased where the apiary is large, as all this bustle goes on at the mouth of every hive, and the throng is so great, and the individuality so distinct—each one having his own special errand—that it resembles nothing so much as Fleet Street at ten o'clock in the morning.

Besides the porters passing to and fro, there are sentinels who keep strict watch, and challenge each one who enters; and very rough usage will a stranger meet with who attempts to pass, that is to say, empty handed, for bee virtue cannot withstand a bribe, and a straggler honey-laden is welcome anywhere. There are also the ventilators, a party of whom stand in line at the entrance, and another party further within; these face each other, vibrating their wings so rapidly that the movement is almost imperceptible, the effect of which is to create a current of air through the hive powerful enough to be distinctly felt if we approach the entrance. The necessity for this work of ventilation of course is greatest in hot weather, and during the summer months it is carried on more or less energetically both night and day. The labour is so fatiguing, that every fifteen or twenty minutes those engaged in it retire, and another set take

their place. So effectually is the work done, that Huber, by a series of delicate experiments, detected scarcely any vitiation of the atmosphere even in the most crowded part of the dwelling ; and not only is there a circulation of fresh air around each comb, but along every cell, and even those brood cells which are sealed over share the benefit, as the cover which appears solid to the eye is in reality porous, evidently for the free admission of air to the imprisoned chrysalis. There are in addition the nurses, whose duties will appear when we come to speak of the development of the brood ; and the wax-workers, whose operations are most conspicuous after the hiving of a new colony.

It would appear sufficiently extraordinary for a population of 40,000 or 50,000 bees to find accommodation within such a confined space as a cottage hive affords, even if otherwise empty. But on looking within—supposing it to be of glass instead of straw, and that stings are a pleasant fiction—it is seen to be filled with nine or ten distinct combs, standing like partition walls from the roof to the floor, and placed so close together, that only the tip of the finger can be inserted between them. Where the bees find house-room it is not easy to say. During a great part of the year the empty cells are available, and bees may regularly be seen buried head foremost in them taking their repose. But during May, June, and July, every cell is otherwise occupied, and the only available space is the interval of half an inch or less between each comb, and a similar interval between the lower edges and the floor board. True, they cluster upon the combs as thick as mussels on a rock, so thick that nothing else is to be seen, but still space has its laws, and bees seem able to defy them.

A fragment of this empty comb is worth examining. It consists of a central wall—a thin perpendicular plate of wax—which is the foundation for a series of cells projecting horizontally from either side of it. Though the comb is attached by its two lateral edges as well as the upper edge, that is to say not only to the roof, but to the two opposite sides of the hive, it is difficult to understand how such a fragile material can bear the strain which is put upon it. A comb when filled will weigh four or five pounds ; a central comb, if complete throughout, will weigh still more ; and in large supers combs have been known to weigh ten, fifteen, and even twenty pounds, and yet the material is not much thicker than tissue paper.*

* The thickness of a cell wall (single) is computed to be the $\frac{1}{15}$ th part of an inch.

On holding up a piece of virgin comb to the light, it will be seen that the centre of any given cell does not correspond with the centre of the opposite cell, but with its outer edge. Not only so, but the partition-wall, instead of being a plane, is a series of alternate angular undulations, as may be seen by carefully stripping off a few of the cells, thus strengthening the wall itself on the principle of corrugation, and also the roof of each cell by making it pyramidal instead of plane.* Moreover, each cell has its six sides strengthened by those of the adjoining cells, so that each wall is in reality double. Thus every cell is welded at its sides and base to nine neighbouring cells, and gains every possible support both laterally and perpendicularly. The whole arrangement secures an economy of strength, of material, of labour, and of space, which is probably without parallel. A single pound of wax thus fabricated into comb will hold thirty pounds of honey, which, roughly estimated, is equivalent to eight imperial quarts, a surprising result both as regards strength and capacity. Or the economy of material may be shown in another form. One square inch of comb contains fifty worker-cells (twenty-five on each side), so that a comb twelve inches square contains 7,200 cells. Reckoning nine such combs in a hive, we have 64,800 cells elaborated out of rather more than a pound of wax.

The contents of the combs are arranged in a strictly methodical manner. In every case the upper cells are used for storing honey, the middle and lower cells contain brood, while a fringe of cells surrounding the brood is generally filled with pollen or bee-bread, the same substance being often deposited irregularly throughout the comb. On some of the outer combs will be found a series of cells both longer and wider than the rest. These are drone-cells, in which the male insects, from 1,000 to 2,000 in number, are hatched, and which cells are afterwards used for storing honey. Finally, in some part of May or June, there will be found several pear-shaped cells, generally placed on the lower edges

* A rude model in reverse, of a single cell, may be made by cutting a portion of a cedar pencil into six equal sides. At the lower extremity cut upon one angle until it is level with the two adjoining angles, or in other words, cut down two of the six sides into one; repeat this with the remaining alternate angles. There is now a six-sided body, representing the main portion of the cell, while the extremity or roof has but three sides. If a number of these pointed roofs were grouped together, they would show a surface of alternate blunt points and angular hollows exactly proportioned to each other. And the central plate or partition-wall presents just this appearance (giving a saw edge if seen in profile), the points forming the roofs of the cells on one side, and the hollows the roofs of those on the other.

of the combs, and these are the cradles of royalty. Three ordinary cells are broken down to make room for one of these, in forming which there is a lavish expenditure of material, which is not pure wax, and is much more brittle. Instead of being placed horizontally like the rest, they are placed vertically, the mouth, or narrow end of the pear, opening downward. The reason for this position was for a long time a mystery, and it was supposed to have some occult influence on the development of the insect; but Mr. Langstroth, who has solved so many aparian difficulties, shows that it is merely a question of convenience, the requisite space being obtained in this way without interfering with the passage between the combs. Thus in every hive there are three kinds of cells, in which three descriptions of bees are raised.

There are also three kinds of material gathered for the use of the hive,—pollen, propolis, honey. The earliest work of the bees in spring, is the gathering of pollen from the few plants and flowers that have awakened from their winter's sleep. This labour continues all through summer and autumn, and even into winter, for up to the end of November, should a few fine days occur, occasional labourers may be seen going in with their loads, obtained generally from the late-blooming ivy. The quantity gathered of this substance has been estimated as high as a pound in a single day, and one hundred pounds during the season.

When the bee alights on a flower, she involuntarily gathers some of the dust from the stamens, which is caught in the hairs with which the body of the insect is covered. But in addition to this the material is rapidly collected by the feet, and kneaded into the hollow of the hind legs, hanging there in two large pellets. *How* this is done we cannot say, as the bee works very quickly, and soon passes to another flower. It has indeed been conjectured that the kneading process is accomplished while on the wing. Be that as it may, it has been wisely ordered that the bee visits only one kind of flower during each journey, or endless hybridisation would be the result. If on sallying out, a primrose first attracts attention, the load is gathered from primroses solely, and no other flower can draw her away. In the case of certain flowers, especially in a dry atmosphere, the particles will not cohere, and instead of the ordinary burden, the bee returns to the hive dusted over its whole body with the delicate powder. Once within the hive, part of the load is often eaten off by the nursing bees for immediate use. With the remainder the forager proceeds to an empty

cell, into which the hind legs are inserted, and rubbed together, when the little cakes of bee-bread drop off. They are then left to the care of another set of workers, who pack it closely within the cell, adding successive burdens until the cell is full, when a little honey is poured in, and it is sealed over. Although such care is taken in the gathering, not to mingle two kinds of pollen together, no such distinction is made in storing it, three or four different sorts being piled one upon another. In the former case a great purpose is to be served by the distinction, in the latter there is none, and the distinction ceases. Mr. Quinby points out the curious fact that this substance is never by any chance stored in drone cells, the reason for which is not apparent. Some portion of the prodigious stores thus collected is consumed by the adult bees, and especially during the time of comb-building. But the greater proportion is employed in feeding the young brood; the milky substance found in the cells of the larvæ consists of pollen, water, and honey, partially digested in the stomachs of the nurses, pollen being also the chief ingredient of the more substantial *bee-bread* given to the advanced larvæ. This fact was ascertained by Huber in a series of careful observations, and was confirmed by the dissections of John Hunter, who, in the midst of his arduous labours, found time to observe and experiment on the honey-bee. As showing the importance of pollen in inducing the queen to commence laying, Mr. Langstroth gives an instance which occurred during the backward spring of 1852. In opening a hive on the 5th of February, he found many cells filled with brood. Eighteen days later he found neither eggs, brood, nor pollen. A supply of the latter was furnished from another hive, when in a few hours egg-laying commenced. When this supply was exhausted, the queen again refrained from depositing, but re-commenced when fresh pollen was furnished. The weather during these experiments prevented the bees from leaving the hive, so that nothing could interfere with the result of the experiment.

It is a rule with bee-keepers that if pollen be carried into a hive, there is certainly a queen at the head of it. But this is a very uncertain test. Bees will carry in pollen, as it were, mechanically, and in obedience to a blind instinct, long after the last embryo has hatched out, and when no queen reigns, and no possibility exists of raising one. For example, in an old stock hive, which when turned up was found to contain only a hundred or two of bees, of which more than one-half were drones, and which contained no vestige of either queen

or brood, pollen had been carried in but a few hours before. Again, in a prime swarm, which had been brought from a distance, the queen of which was found dead the next day, the bees rapidly dwindled away to less than half their number; but these commenced comb-building, and for a day or two pollen was brought in, though no queen existed. Doubtless many apiarians are furnished with similar facts; but Mr. Quinby is the only writer who states that such is the case, and that the mere carrying in of pollen is no proof whatever of the existence of a queen. On the contrary, queenless stocks often gather it diligently, and accumulate large stores.

The question has often been raised whether pollen really forms part of the food of adult bees; but, although positive evidence can hardly be furnished, the amount of circumstantial evidence must be considered conclusive. To take one instance. Late in the season Mr. Langstroth drove a strong colony into an empty hive. The weather being very favourable, large quantities of this substance were gathered, and comb was built very rapidly. On the tenth day no brood whatever existed in the hive, so that the stores gathered could not have been consumed in that way, and yet very little was laid up in the cells. Moreover, on one of the days in question, which was too stormy for the bees to venture out, they were supplied with rye-meal as a substitute, none of which was found during the examination on the tenth day. The disappearance of the pollen can only be accounted for on the supposition that it was eaten. The rye-meal might possibly have been carried out; for although much has been said in its favour as a substitute, we have never known it to succeed; but there can be no possibility of doubt as to the bee-bread. In old hives the quantity stored up as surplus will be as much as six or eight pounds, and very unsavoury it becomes. It is the presence of the pollen which gives the peculiar flavour to honey taken from the stock-hive, in contrast to super or virgin honey.

Propolis is a resinous substance which coats the buds of some trees, as the horse-chestnut, poplar, and willow, and of some flowers, as the hollyhock. The quantity gathered is not very large, and it is only collected as occasion requires. Owing to its glutinous nature it can only be got in the middle of the day, when the sun has sufficiently softened it; even then the labour of collecting it is great, and the difficulty of getting rid of it is scarcely less. It is made into a cement by mixing with a certain proportion of wax, and is then used to fill up

cracks, joints, and openings of every kind. The hive is by this means fastened down to the floor-board, the lid (if a wooden one) to the sides, and the frames in such hives are so fixed in their places as to require an instrument and some little force to move them. When combs are transferred to new frames they are at first fixed in their places with this substance, and so rapidly that, in three days at furthest, the nine or ten combs will be fastened along the four edges of each. The inside of the hive and of every cell is also varnished over with a thin coating of this substance.

In some of its applications the instinct of the bee seems at fault, for every opening is filled up, whether it allows the admission of air or not. When a thermometer is placed in a hive, unless it fits against the glass window with perfect accuracy, propolis will be inserted so far as to obliterate the index. This is not merely occasional, but is invariably the case. Probably, however, the intention is not only to keep out enemies and to retain the heat, but to fasten everything securely in its place. Thus if a comb gives way, the first act of the bees is to fix it as it lies. It is then connected above with the adjoining combs, and tunnelled through below to allow free passage to every part. When assailed by wasps, or by robber bees, a barrier of propolis will sometimes be erected at the entrance to the hive; but reversing the mode in which the entrances are artificially contracted, and from which a hint might perhaps be taken. Instead of closing the ends and having a passage in the centre, the wall of propolis is reared against the centre, leaving an entrance at each end. Marvellous stories have been told of the uses to which this material is sometimes put; how enterprising snails, who had made their way in, never found their way out, being sealed to the spot on which they stood; and how even mice after being stung to death were enclosed in an air-tight sarcophagus. These stories are undoubtedly true; but it is remarkable that no fresh examples are discovered, notwithstanding the increased number of observers now daily at work. Though a comparatively small quantity of propolis is required, yet it is a prime necessity, and must be procured in one form or other. When natural supplies fail, the bees betake themselves to any available substitute. They have been known to carry off pitch from the rigging of vessels, and in repeated cases to visit the paint-shop, attracted by the smell of varnish. This throws some light on a popular superstition, and one that is by no means confined to the most ignorant class. It is believed that if a member of the owner's family dies, and especially if

the owner himself should die, and the bees are not informed of it, they will dwindle away and perish from real sorrow. Indeed, it is common in such cases, not only to make a formal announcement to the inmates, but to put the hives into mourning by tying a bit of crape round each. Mr. Langstroth says, "It has been asserted that they sometimes take their loss so much to heart as to alight upon the coffin whenever it is exposed. A clergyman related that he attended a funeral, where, as soon as the coffin was brought from the house, the bees gathered upon it so as to excite much alarm. Some years after this occurrence, being engaged in varnishing a table, the bees alighted upon it in such numbers as to convince him that love of varnish rather than sorrow for the dead was the occasion of their conduct at the funeral."

The third substance gathered is, of course, honey, which if not the end and object of bee-existence, is certainly that of bee-keeping. This sweet substance is secreted in the nectaries of flowers in their early prime. It is not supposed to assist in the nourishment of the flower, or to have any other than a secondary office. Its sweetness is an attraction to flies and other insects, who, while collecting it, carry also with them from flower to flower some grains of farina, and so assist in the work of fertilisation. In some flowers the secretion is abundant; in others it is very scanty; and in all cases it is much affected by the weather. In certain states of the atmosphere there is a great scarcity, notwithstanding the number of flowers in bloom, while possibly, on the following day, there will be an abundance, and as much honey may be stored as during a week previous. In some seasons the harvest will continue abundant for a time, and then suddenly cease, without any apparent change as regards heat or cold. As a rule, a dry summer gives an abundant supply. It is curious to note that of late good and bad harvests have come in triplets of years—thus, 1857-58-59 were good; 1860-61-62 were bad, so bad that the winter of 1862 gave the finishing stroke to many apiaries; 1863-64-65 were good again, though the exceeding drought of 1865 stopped all honey-gathering after the first week in July. The chief supplies in this country are obtained from the clover, the bean flower, and the heather, the first being the finest flavoured, and the last the coarsest. The apple blossom in the spring, and the lime blossom in July, are also valuable sources. There are some flowers rich in this secretion that would not be suspected of it, as the dandelion and the onion. Those who have had opportunities

of observation, say that the rank flavour of the latter passes off before the cells are sealed over, this operation being deferred for a longer period than usual. Garden flowers are of very little importance to an apiary. Double flowers are useless; no one ever saw a bee alight on a standard rose, or a picotee, or a dahlia. And of single flowers, when it is remembered that fifty or sixty blossoms must sometimes be visited to secure a single drop of honey, it will be seen how little the resources of a garden can avail. Those who wish for the pleasure of seeing their bees at work, generally sow borage and mignonette, and in large beds. These masses of bloom often furnish a pretty sight, especially in uncertain weather, when the foragers are less disposed to travel far, for ordinarily they prefer to gather from a distance rather than from sources close at home. But on a showery day, during an interval of sunshine, the poet's description is more strictly true than usual, and

“—every flower hath on its breast a bee.”

Many persons have the idea that bees will travel immense distances in search of honey; and the speed of their flight, which is at the rate of about a mile a minute, serves to strengthen this idea. Three and four miles are often named, but this is nothing compared with the speculation of an agricultural bee-keeper, who, on a clear day, pointed out certain moors, which were just in sight, and expressed his belief that his bees could reach them, the distance being, as the crow flies, rather more than eleven miles! The ordinary range of a bee's flight is under a mile; but when forage is scarce, and especially when within scent of heather, a distance of two miles is often noted. Those who are most familiar with the habits of our little friends never seem to lose the feeling of surprise at the results which they accomplish. Nowhere else is there such an example of the power of the unit. A bee is not so very much larger than a fly, and in appearance is a perfectly insignificant creature, and yet the results which it accomplishes are far above the standard of the larger forms of life. It flies, say a mile away from home, and alighting on a freshly opened flower, drinks from it a minute portion of honey, so minute as to be invisible to the eye, and after repeating the process numberless times, secures with all its labours one load, a single drop. This is retained in a pouch or sac, equivalent to the crop in pigeons and other birds. Returning to the hive, supposing that she escapes the young and hungry bees at the entrance, she stores the

tiny gathering, and after a short interval repeats the journey. After a few such gatherings comes an interval of rest. This goes on day by day so long as fine weather lasts. It must be remembered that only the older bees are thus collecting, perhaps one-half the number, the rest having duties to attend to at home. The former have to provide for the daily wants of the hive, which are considerable; every wet day is not only a blank, but makes an inroad on the store, and an abundant supply must be laid up for winter. Nevertheless, during the six weeks, or in rare cases two months, that honey is abundant, we find all this accomplished, and in good seasons a surplus gathered, amounting, sometimes, to fifty, seventy, and even one hundred pounds. It is true these latter figures are exceptional, and refer chiefly to the south and west of England. But the first-named figure is often reached in the midland and northern counties; and in those districts of Scotland where they have the advantage of both wild flowers and heather, ninety and one hundred pounds are occasionally got, the result of incredible labour and perseverance. The stores sometimes collected by a colony of ants are amazing; but a heap of damaged wheat does not strike the eye like a bell-glass filled with snow-white comb.

Having briefly sketched the out-door labours of the hive, let us return to its internal economy. A great deal has been said about the authority of the queen over her subjects, how she visits every part of the hive, and commands that this or that be done, and how implicit is the obedience paid to her command. This has been repeated in books until it is one of the general articles of faith. The greater part of these statements is purely imaginary. The queen is more strictly the mother of the hive than its ruler. A virgin-queen is treated with scant ceremony, and counts for little more than a common worker. It is only after commencing to lay that she receives such marked attention. Thenceforward she is always surrounded by a number of attendants, is caressed and fed, and her movements through the hive create a sensible commotion. She is the hope and mainstay of the community, and is the object of their constant solicitude. They incessantly assure themselves of her presence, and so long as she continues to fulfil her duties, she receives to this extent the homage of her subjects. She is, however, very much under the control of the workers, who in reality themselves regulate the duties which are performed. Thus the hive does not resume its activity in the early spring because the queen has begun to lay, but rather the queen's return to her maternal

duties, is stimulated by the workers, who are bringing in fresh pollen. And so it is throughout. Indeed, a great aparian authority declares that it is at the peril of her life that the queen ventures beyond the limits of the brood bed, or central portion of the hive. It is certain that she is often maltreated, her wings bitten, sometimes a leg broken, and her person so rigorously imprisoned that after many hours, even days, of misery, she dies the cruel death of suffocation. In these attacks the knot of bees who are acting the part of executioners, form a compact cluster or ball, with the unhappy queen in the centre, and so firmly do they cling about her, and so fiercely intent are they upon their object, that the ball may be rolled about on a board, without causing it to disperse. The cause of these attacks cannot be even guessed at. If it were to get rid of a superannuated queen, the proceeding could be understood. But so far from this being the case, it is not uncommon for a young queen to be attacked on her return from her marriage flight. And thus when, on the one hand, the hive is about to start a new and prosperous career, and when, on the other, not a single larva exists from which to raise a successor, the moment is chosen to destroy the queen, when her loss entails the loss of the whole colony. It has been thought that these attacks are commenced by one or more stranger bees, who give the signal for attack, which is quickly joined in by the rest. Others say that although a stranger bee, who makes its way in by mistake, will not hesitate to attack the queen, yet it is the sting that is then used (the bee apparently acting under the impression that it is the queen who is the intruder). But it is not usual for bees to sting their own queen. The fiat may be death; but it is death by a slow process, and it is the result of a general impulse, and not the act of a few. One or two examples of what has been called the "regicidal frenzy" may be interesting:—

"The bees becoming unsettled, and buzzing a good deal, led me to open the shutter [of the observatory hive], when I found a queen treated as a strange queen, and closely matted over by a cluster of bees. I thought, as there was no other queen in the hive, that a stranger had by some mistake entered, and dispossessed the rightful sovereign. But, no; all my other hives had their respective queens, and it was their own sovereign they were strangling. For several hours I laboured to relieve her, but the persecution never abated, and this morning she was lying almost suffocated on the bottom of the hive, firmly enclosed in a cluster of bees. I took her from them, fed, and revived her, and, after a lapse of six hours, have again presented her. But she has again been seized and imprisoned as a stranger. I am

confident they will kill her. . . . Although the queen regained her liberty, and all went on peaceably for a time, yet a second assault was made a fortnight later, when, in cold blood, and without any apparent cause, the rightful sovereign was dethroned, and either put to death, or expelled."—*Journal of Horticulture*, Sept. 29, 1863, and Jan. 19, 1864.

"Another case has caused me much vexation, having cost me the loss of a young queen bred late in the season, and which I was especially anxious to preserve. On the evening of the 4th inst. I noticed a violent commotion among the inhabitants of a nucleus box containing a queen thirteen days old. On opening the hive, and lifting out the comb, I presently discovered the horrible little regicidal cluster, with whose appearance I have, unfortunately, become too familiar not to recognise it immediately; and having manipulated it in the manner before described—namely, to lift out the cluster, and while walking away from the hive, to detach the workers one by one, throwing them up into the air that they might return home, I had the mortification of finding its nucleus to consist only of the lifeless and disfigured remains of my once beautiful queen."—*Ibid.* Sept. 26, 1865.

The following case occurred during the transfer of combs from a nucleus box to a full-sized hive:—

"The day happened to be very warm, and, in defiance of Dr. Cuming, marauding bees were provokingly numerous. I therefore expedited proceedings as much as possible, consistently with keeping a bright look-out for the juvenile matron, for whose safety I was necessarily most anxious. Comb after comb was lifted out, carefully scanned, and transferred to the new domicile, but all in vain, no queen could I see; and, dreading a repetition of the operation in the face of so many foes, and equally fearing to leave her fate in uncertainty, I anxiously examined the few stragglers remaining in the now unfurnished habitation. Amongst them, to my great joy, appeared the missing queen, which I at once carefully took up in my hand with the view of transferring her to her new habitation. Whilst in the very act of doing this, she was pounced upon by a marauding bee, locked in whose dire embrace she rolled to the bottom of the new hive, the bees in which were now in a state of the utmost agitation from the removal, and the incessant attacks of a fast-increasing cloud of marauders. What was now to be done? Nothing, but again to lift out the combs and secure the queen, if haply she had not already received some fatal injury. This was effected as rapidly as possible, and the poor queen appeared still locked in the deadly embrace of her foe. Taking both in my hand, I quickly crushed the life out of the aggressor, and most apiarians will, I think, sympathise with the feeling of relief I experienced at finding that the royal and unoffending object of this fierce attack had escaped uninjured. Her troubles were, however, not entirely over, for scarcely had I freed her from the mandibles of her first antagonist, which still kept their hold with bull-dog-like tenacity, even when the body to which they had belonged was crushed into a shapeless

mass, than, whilst still in my hand, she was laid hold of by another marauder. To this would-be regicide I speedily administered the *coup de grâce*, popped the queen between a couple of the exposed combs, and covered the hive with its crown-board as speedily as possible."—P. 395.

The natural term of a queen's life is from three to four years, and after once commencing to deposit eggs, she never again leaves the hive, unless at the head of a swarm. Her duties are very onerous. The naturally short life of the worker-bees, and the numerous casualties to which they are subject, require constant and large accessions to the population of the hive; besides which, provision must be made for new colonies, and this within a very brief period, so that during May and June, the queen will lay from 1,500 to 2,000 eggs in a single day, and often more. Among wasps and hornets, the queen is the only one of the community that survives the winter, and then is compelled each spring to commence *de novo*, building up her colony so slowly that it only attains its full strength in August. But the queen-bee commences operations in the spring, still surrounded by thousands of adults who, moreover, are able to maintain a high temperature within the hive, for assisting the development of the young, no matter what may be the state of the atmosphere without, and having stores reserved from the previous summer, sufficient to maintain themselves and the young brood until the flowers appear. The numbers thus rapidly increase, and are ready to take full advantage of the supply of honey when it comes. The colonies are thrown off when food is in the greatest plenty, and when alone there is the possibility of building a sufficiency of comb, and laying up a store for winter. If the breeding season were earlier, the honey laid up in the hive would be consumed before the flowers appeared, and so the whole community would perish, and if later, the season is so short that the parent hive alone would be able to take advantage of it, and the colonies would perish.

The manner in which egg-laying commences in weak and strong hives respectively, after the winter's sleep, is thus described by Mr. Quinby:—

"The first eggs are deposited in the centre of a cluster of bees, in a small family; it may not be in the centre of the hive in *all* cases; but the middle of the cluster is the warmest place, wherever located. Here the queen will first commence; a few cells, or a space not larger than a dollar, is first used, those exactly opposite on the same comb are next occupied. If the warmth of the hive will allow, whether mild weather

produces it, or the family be large enough to generate that which is artificial, appears to make no difference; she will then take the next combs exactly corresponding with the first commencement, but not quite as large a place is used as in the first comb. The circle of eggs in the first is then enlarged, and more are added in the next, &c., continuing to spread to the next combs, keeping the distance to the outside of the circle of eggs, to the centre, or place of beginning, about equal on all sides, until they occupy the outside comb. Long before the outside comb is occupied, the first eggs deposited are matured, and the queen will return to the centre and use these cells again, but is not so particular this time to fill so many in such exact order as at first. This is the general process of small or medium-sized families. I have removed the bees from such in all stages of breeding, and always found their proceedings as described.

"But with very large families their proceedings are different. As any part of the cluster of bees is warm enough for breeding, there is less necessity for economising heat, and having all the eggs confined to one small spot, some unoccupied cells will be found among the brood; a few will contain honey and bee-bread."—Pp. 64, 65.

The egg thus deposited adheres to the bottom of the cell in consequence of the glutinous matter with which it is coated, and so remains for three days. It then hatches into a small white grub, and is abundantly fed with a mixture of half-digested pollen, honey, and water. Laid at the bottom of the cell, it grows rapidly, at first slightly crescent-shaped, then a half circle, then filling up the floor of the cell with the head and tail in contact. Then there is a change of position, and the worm crawls up the side of the cell which it nearly fills, its head being level with the entrance. During these six days the nurses are unremitting in their attention, examining the cell every few minutes, and occasionally adding to the supply of food. On the tenth day the cell is sealed over, not with pure wax, but with a porous material consisting of pollen and wax, which, though strong enough to retain the worm a prisoner, is quite pervious to the air. On being thus sealed up, the worm spins for itself a thin cocoon of silk which envelopes its whole body. During the twelve days of its imprisonment the insect passes from the larva state to that of the pupa or nymph, losing gradually all the features of the worm except the annulated body; developing legs, wings, antennæ, the simple and compound eyes, hair over the entire body, and, indeed, all the features of the perfect insect; changing also in colour from white to brown, and then to a dark grey, and on the twelfth or thirteenth day after sealing over, and the twenty-first from the dropping of the

egg, the little creature emerges a weak and moist, but perfect bee. Very curious is it to watch the insect breaking through its covering. Generally one of the antennæ, sometimes both, are protruded, or it may be the proboscis is thrust out asking for food. With difficulty the feeble insect gnaws away an opening sufficient to free the head. Then the most strenuous efforts are made to crawl out. But this is a work of some difficulty, for not only is the effort a severe one under the most favourable circumstances, but the bees which previously were so careful and attentive, are now perfectly indifferent to the infant's struggles, and trample over it without mercy, often forcing it, when its escape was almost completed, to retire to the bottom of its cell, and begin afresh. When free, it licks itself over, looks round upon a very bustling and pre-occupied world, very likely holds out its proboscis expecting to be fed, gets knocked over for its pains, and, finding that the "welcome" accorded to "little strangers" is merely formal, proceeds to help itself. After keeping close quarters for several days, rapidly gaining strength and a more natural colour, it ventures out in the middle of some fine day with a number of its fellows, who hover in a little cloud in front of the hive, exercising their wings, and rejoicing in their new-found powers. For two or three weeks the internal duties of the hive, the cleansing of the cells, storing of the pollen which has been brought in, attending to the larvae, and working in wax, devolve upon the young bees, while the older and stronger are employed in foraging. Eggs are laid in the cells almost as soon as they are vacant, and so the round begins once more. The term of a worker's life depends upon the season in which it is born, and the amount of labour which it accomplishes. Bees hatched in the autumn will live through the winter, and well into the spring—say six months, the greater part of which is spent in a half-dormant state. But those born in the busy season soon present the appearance of old age, the hairs with which the body is covered wear off, and the body is black and shining, the wings become more or less ragged, and they are not supposed to live much longer than six weeks; the food therefore that they store up with such unceasing industry is not for themselves, but for a succeeding generation. This point has been decided, like so many others, by the introduction of the Italian bee, the difference in colour allowing of ready discrimination. Thus, if an Italian queen be placed at the head of a common stock, it will be found that in six weeks after the eggs have begun to hatch out, the Ligurians will preponderate, and in two

months' time very few black bees will remain. Perhaps this result should be taken as approximate rather than decisive,asmuch as the Ligurians are the stronger, and bear themselves accordingly, and where the two races meet, among bees as among men, the black race goes to the wall. Lest this should be considered purely fanciful, it is sufficient to say that bees, though the most courageous of insects when all goes well with them,* are easily depressed by any domestic misfortunes, and when so discouraged, they die off rapidly. There is in a mixed hive every appearance of harmony, yet the distinction between the two classes of the population is as marked as between any extremes of aristocrat and plebeian, and in the natural state there is a strong antipathy between them. Bees manifest an extreme sensitiveness to surrounding circumstances, and it is easy to imagine that when the original owners of the hive see the strangers increasing rapidly, and their own numbers as rapidly diminishing, a sense of discouragement comes upon them, and they make haste to yield to their fate. But whether or not, there can be no doubt that the bee is a short-lived creature, and that it is worn out by its ceaseless activity.

What may be deemed the special apparatus of the worker consists of, 1. a long and flexible proboscis, which is a marvel of exquisite mechanism, and which, notwithstanding what has been said to the contrary, is not solid, and therefore merely a tongue, but a hollow tube through which is drawn up the honeyed secretion of the flower ; 2. the mandibles and maxillæ, which are employed in cutting and moulding the wax, as the tongue is also incessantly used in polishing it ; 3. a honey bag, which is a sac for temporary use, and can be contracted at will by powerful muscles, and the contents returned through the mouth into the cell ; 4. the hollow

* What Mr. Ruskin says of the fly is still more true of the bee, so far as courage is concerned. "Strike at him with your hand. To him the mechanical fact and external aspect of the matter is, what to you it would be, if an acre of red clay, ten feet thick, tore itself up from the ground in one massive field, hovered over you in the air for a second, and came crashing down with an aim ! That is the external aspect of it ; the inner aspect, to this fly's mind, is of a quite natural and unimportant occurrence—one of the momentary conditions of his active life. He steps out of the way of your hand, and alights on the back of it. You cannot terrify him, nor govern him, nor persuade him, nor convince him. He has his own positive opinion on all matters, not an unwise one usually, for his own ends, and will ask no advice of yours." But while the fly simply evades the danger, the bee resents it. The more demonstrative the power, the greater is her fury. Your huge form she will attack, though always to her own destruction,—

"Deems life itself to vengeance well resigned ;
Dies on the wound, and leaves the sting behind."

or basket on the hinder pair of legs, into which is kneaded the gathered pollen ; 5. the eight pouches on the under side of the body, in which, in the case of the young bee, wax is secreted ; and lastly, the sting with which her treasure is defended.

Eggs are deposited in the drone cells toward the end of April, or beginning of May, according to the locality and the season, and the state of the population, and the prospects of the honey season. For all these matters enter into the account before the egg-laying commences. Should there be an unfavourable change of weather, the drone brood is often destroyed, and cases have occurred in which such a change caused the destruction of the drones before the end of May. Their appearance is the sure sign of prosperity in the hive, and is always hailed with joy by the beekeeper, though he may not, like old Bonner, make holiday and high festival on the occasion. About 2,000 drones, more or less, is the proportion in a large hive. The cells are longer and wider than those of the workers—about a third more in capacity. Though more simple in structure than the other two classes of bees, the drone is the longest in coming to maturity, the eggs requiring about twenty-four days to hatch. The drone, which, it is hardly necessary to say, is the male bee, is a large and handsome insect. He is treated with great respect, even from his birth, being assisted with much assiduity in his exit from the cell. He is a person of no small consequence in the community, and is perfectly aware of it. He is fussy and pompous in his gait, and thinks nothing of upsetting two or three modest little workers if they stand in his way. He does no work, not being provided with the necessary tools ; indeed, he rarely goes out to take the air until the middle of the day. He lives as he lists, and on the best of fare. Fortunately he is not provided with a sting, or there would be no dealing with him. The drones live about three months, or until all prospect of swarming is at an end, when, their services being no longer required, they are destroyed. And a strange sight it is to see these heavy and powerful bees dragged out by two or three executioners, sometimes disabled by having their wings bitten at the root, sometimes stung to death, sometimes uninjured, so far as outward appearance goes, but simply refused admission, when the same dejection, already spoken of, appears to seize them, and after making sundry ineffectual attempts to enter, they go off and die with patriotic devotion.

After the drones are hatched, and when the population

has increased so as to overcrowd the hive, preparations are made for swarming, the most important being the building of royal cells. These, as we have seen, are formed by breaking down the portions of a group of worker cells, and throwing them into one with such a liberal use of wax that it looks almost clumsy when compared with the dainty neatness of all the other architecture of the hive. A peculiar and highly stimulating kind of food, according to the old theory, is prepared for the young larvæ, while, according to the modern view, the food is the same as that first given to the worker grub, but continued during the whole time that it remains in the larva stage, instead of being changed. This view is greatly strengthened by the fact that a common grub which has for three days been fed in the ordinary way, can be changed into a queen, identical in all respects with those originally set apart for this purpose. The result of the diet, which it must be remembered is only continued for three days longer than in the plebeian order, and the enlarged capacity of the cell, is seen in an insect altogether different from the worker bee. It differs in size, being larger by about one-third, and also in shape, in colour, in its structure, and in its propensities. It is furnished with a short proboscis, unfit for gathering from flowers; it has no pouches for secreting wax, and neither brushes nor baskets on its legs; the abdomen is prolonged and pointed, evidently for greater facility in depositing eggs; the wings are short in proportion to the body, so as to be out of the way in performing the same all-important function; the sting is longer and differently shaped; but the greatest change of all, and that to which all the others clearly refer, is the power of producing eggs in almost unlimited quantity during the three or even four years to which the royal life is prolonged. Along with these physical changes there is a total change of instinct. "Reared as a worker, it would have thrust out its sting at the slightest provocation; whereas, now, it may be pulled limb from limb without attempting to sting. As a worker it would have treated a queen with the greatest consideration; but now if brought in contact with another queen, it seeks to destroy it as a rival. As a worker it would frequently have left the hive, either for labour or exercise; as a queen it never leaves it after impregnation, except to accompany a new swarm." In the three orders of bees the comparative rate of development is precisely the reverse of what might be expected. Thus the drone, which is the most simply organised, requires twenty-four days from the egg to the perfect insect. The worker, which is more elaborately constructed,

matures in twenty-one days. While the queen, a vastly superior insect, emerges from the cell, and in perfect vigour, in sixteen days. The number of royal cells varies considerably; it is rarely less than two, or more than five,* and the larvæ being of different ages, mature in succession. The bees having made their preparations for swarming are still not irrevocably committed to the step. There must be an abundant population, including drones, an abundance of honey, and settled weather. Should circumstances change and become unpropitious in any one particular, the royal brood will be destroyed rather than the colony will leave. Indeed, it often happens that a hive, which is literally crowded out, so that a mass of bees hangs outside in a cluster the size of a hat, will continue in that state for weeks, idle of necessity, and yet refusing to swarm, waiting for some subtle atmospheric change, known only to bees and fishes. Should circumstances be favourable, and give the prospect of a fair start in life to the young colony, the swarm throws off as soon as the first royal cell is sealed over, which is on the tenth day from the laying of the egg. The hive is now left without a queen, but with several in prospect, and as soon as the confusion has subsided, the remaining bees proceed with their work in the ordinary way. The combs are full of brood and honey, and the population is being daily recruited by the hatching out of the former. There are guards round every queen cell, whose duties vary according to circumstances. When the oldest princess forces her way out of the shroud, her first impulse is to visit the other royal cells one by one, to tear them open in a fit of fury, and by means of her long and curved sting, provided for this very purpose, to destroy each of her rivals. And while we have so often to admire the wonderful arrangements of the Creator for the preservation of offspring, we have here equally to admire the arrangements made for their destruction. For while the drone and the worker larva envelope the whole body in a cocoon, the royal larva is only enclosed as regards the upper por-

* As many as thirteen have been very occasionally found, and a case is recorded of seventeen being completed, which were cut out and placed at the head of as many colonies. To all these figures there are numerous exceptions; queens have been hatched, perfect in all respects, on the eleventh day, and again they have been protracted to the twenty-first day. Worker-brood is also often hatched out both sooner and later. See on this point the *Journal of Horticulture* for July 18th, 1865, in which occurs a very curious case of retarded hatching, the period of excess extending over several weeks. It is evidently in great measure a question of temperature, as a very slight degree of heat is sufficient to retain the vitality of the egg: the ova of salmon packed in ice, and the eggs of insects very slightly covered from the frost of winter, being familiar examples of retarded power.

tion, leaving the abdomen exposed to the deadly sting. Were the cocoon complete, the sting of the attacking queen would be entangled in it, to her injury and probable destruction. One swarm having already gone off, it must now be decided whether further swarms shall issue or not. There may be a second, even a third, and a fourth swarm, the numbers of each growing rapidly less until the hive is exhausted, or there may be none. But it is the workers who decide the point. If no more swarms are to issue, they allow the first-born to destroy every one of the immature queens, which she does with unmistakable hatred and rage, the bees assisting her to tear open the cells, while she delivers the *coup de grâce*. If on the other hand it is decided to swarm again, she is warned off by the guards as she approaches the cells, and if she persists, is severely bitten by them, and compelled to keep at a distance. Thus baffled, her anger finds vent in sounds—monotonous sort of croak, which is answered defiantly by one or more of the princesses, who, though still imprisoned in their cells, are nearly ready for freedom, and can very well make their voices heard. This is what is called “piping,” and is the certain prelude to further swarming. These after swarms often have several queens at their head, or rather dispersed among them until hived, when there is a battle royal, and the conqueror becomes the reigning sovereign. In a day or two she flies out to find a mate, and commences to deposit eggs almost as soon as cells are prepared for them.

That the egg which produces the royal insect, is an ordinary worker-egg, is a fact placed beyond the possibility of a doubt. So far from the queen-mother depositing a special description of egg, as was for a long time supposed, it is by no means certain that she deposits in a royal cell, as such, at all. Opinions differ as to whether the bees commence a royal cell around an egg already laid; or whether they first form the cell, and then remove an egg from some worker cell in the neighbourhood. But remembering the intense hatred of the royal insect towards her kind, it is not considered probable that she herself takes any step towards providing a successor, and that it is the workers who take the initiative. Their movements can in this particular be almost directed at pleasure, for Dzierzon states that he can make the bees select any cells he chooses, by transferring to such cells a little of the royal jelly (which would seem to show that the food is really special and peculiar). This fact of the ability of the bees to raise a queen from any worker egg, or from a larva if not more than three days

old, was discovered by Schirach, the pastor of a village in Upper Lusatia. He wrote a most valuable treatise on bees in 1770 (never translated into English), but for a long time his discovery was disregarded, except to be laughed at as utterly absurd. It is indeed the crowning marvel of a marvellous history. No wonder that it was at first received with incredulity, or that Hunter, finding no parallel to it in his extended knowledge of the animal kingdom, joined in the general ridicule, and declared not that there was some mistake in the experiments, or some strange error of judgment, but that the statement was from first to last an impudent fabrication.* Nevertheless, Huber and others were able to confirm the truth of Schirach's discovery, and it has long been the basis of operations in every scientific apiary. Indeed, unless the bees were able to supply the loss of a queen in some such way, instead of the present rapid rate of increase, there would be danger of the bee becoming extinct altogether. For, besides ordinary casualties and old age, queens are in peril from their own subjects, as we have seen, and are more frequently destroyed than is at all suspected. But while there are drones and young brood in the hive, the bees have the ready means of supplying her loss. No better example of this could be found than one given by Mr. Langstroth :—

“A populous stock was removed in the morning to a new place, and an empty hive put upon its stand. Thousands of workers which were ranging the fields, or which left the old hive after its removal,

* It is true that the experiment does not always succeed, and that a queenless stock will sometimes refuse to raise a sovereign from the materials furnished to them. It seems necessary that there should be young bees in the community, as the duties of nursing are conducted by them entirely. Dr. Hunter failed in his attempts to raise a queen artificially, perhaps from this cause, though his device of keeping the bees rigorously confined, apparently without any access to water, and also shutting up flowers with them, was not very conducive to success. On the entire history of the queen, he was most unfortunate, refusing even to believe that the elongated cells were used for them at all, though unable to assign any other office to them. This is the more remarkable, inasmuch as he evidently employed hives which allowed not only of regular inspection, but of immediate access to every part, and his mistakes can only be accounted for by the necessarily irregular observations which his professional duties allowed him to make. On the other hand, justice has never been done to his investigations, and the true conclusions to which they often carried him. Thus he was the first apiarian who made use of the rib for guiding the bees in their construction of comb. Again, in opposition to the received opinion, he affirmed that the queen was not a supreme ruler, but simply “a layer of eggs;” only a bond of union, without which the community has no tie. His remarks on the formation of wax, the temperature of the hive, the material of the royal cell, the lengthening of the cells in old combs, and some other points are equally just, while his discovery of a spermatheca in the female silk-moth, and by express implication in the bee, and his artificial fecundation of eggs therefrom, was a masterpiece of investigation, and brought him so close to the

returned to the familiar spot. It was truly affecting to witness their grief and despair ; they flew in restless circles about the place where once stood their happy home, entering the empty hive continually, and expressing, in various ways, their lamentations over so cruel a bereavement. Towards evening, ceasing to take wing, they roamed in restless platoons, in and out of the hive, and over its surface, as if in search of some lost treasure. A small piece of brood-comb was then given to them, containing worker-eggs and worms. The effect produced by its introduction took place much quicker than can be described. Those which first touched it raised a peculiar note, and in a moment the comb was covered with a dense mass of bees. As they recognised, in this small piece of comb, the means of deliverance, despair gave place to hope, their restless motions and mournful voices ceased, and a cheerful hum proclaimed their delight. If some one should enter a building filled with thousands of persons tearing their hair, beating their breasts, and by piteous cries, as well as frantic gestures, giving vent to their despair, and could by a single word cause all these demonstrations of agony to give place to smiles and congratulations, the change would not be more instantaneous than that produced when the bees received the brood-comb."—*Langstroth*, pp. 67, 68.

In further proof that the worker-egg and royal egg are identically the same, is the fact revealed by dissection, that the worker is an imperfect female, a queen half developed, retaining sufficient of the feminine instinct to watch over and rear the brood, but exercising no strictly maternal functions, save in very exceptional cases.

These same rare exceptions, in which workers become mothers, prove the case more clearly still. That workers, who must of necessity be virgin bees, should be able to lay fertile eggs is surprising, and equally so that such eggs should invariably produce drones. The existence of fertile workers is repeatedly referred to by Riem, Wilhelmi, Schirach, Huber, and Hunter; and the knowledge that in some cases the queen will lay nothing but drone eggs, is of very ancient date. But it remained for Dzierzon to follow up these hints until he was led to the discovery of parthenogenesis in the bee, first by a logical induction, and then as an indubitable fact. Just twenty years ago (in 1845) he propounded his theory in the *Bee Journal* of Eichstadt, establishing it by facts some years later, and it has since, and over and over again, been verified in every particular. For details, the reader is referred to

discovery of parthenogenesis, that it is singular he did not take the remaining step. With the usual exclusiveness of continental naturalists, who habitually ignore all English researches, Siebold says not a word of Hunter's "Observations," though the discovery last named anticipated, so far as it goes, the German naturalists by more than fifty years.

Von Siebold's work, and that of Mr. Langstroth. It is sufficient to say that a virgin queen will lay fertile eggs more or less abundantly, but her progeny are all drones. It is necessary for a queen to have mated in order to lay worker-eggs, while she is able to lay drone eggs in addition, and either kind at will. The discovery of parthenogenesis, though itself a mysterious fact, resolves a series of mysteries of which no explanation could ever be given, and respecting which Huber declared himself lost in an abyss; while it has opened a new chapter in natural history, which has already received many additions.

We have still to give some brief account of the swarming season, and the proceedings of the young colony. The end of May and the whole of June is an exciting time for the bee-keeper, and if he have many hives, he will be fortunate if he escape without losses. As already stated, there is great uncertainty as to the time when the swarm will issue. The old queen is evidently loth to quit the hive, and appears to take advantage of any excuse for postponing her flight. When all is ready within, the weather must be both warm and still. A bee-keeper knows pretty well what is a likely swarming day. There is something in the electrical condition of the atmosphere which renders it favourable or the reverse, for there may be several days apparently fair, on which not a single swarm will issue, while on another day swarms will come off morning, noon, and afternoon, for several miles round. The bees evidently understand beforehand if the flight is to take place. At a given signal, those who are to leave the hive fill themselves with honey, and then the rush commences. The sight of the bees pouring out from the narrow opening, the noise of their flight, their strange gambols in the air, circling and driving hither and thither, and yet not flying away, can be mistaken for nothing else. In three or four minutes they begin to settle, or "pitch," generally on some bush conveniently near the apiary. The cluster rapidly grows larger, until in denseness, blackness, and shape, it is like an immense bunch of grapes. If not secured they are soon on the wing again for some distant and previously selected spot, as an old wall, or hollow tree, or the false roof of a house. If such convenient places be near, or, better still, an empty hive in a neighbouring garden, they fly thither at once. There seems to be a strange partiality for the roofs of houses, if only an entrance can be found, whereas it might have been expected that a lower and more sheltered situation would have had the preference. In these places the communities become very

large by constant accessions. At Hough Hall, in Cheshire, a colony had been in possession of the roof for thirty years, and was the terror of the neighbouring bee-keepers. A still more exposed situation was chosen by a colony which, in 1834, made itself at home on the top of Chichester Cathedral, just below the weathercock. An unused chimney is another favourite resort, and like birds, they have a way of building in an inaccessible place, so that it is often impossible to force them either up or down. One of the oddest places we have known bees to settle in, especially considering their dislike to damp, is the wood-work of a pump. Should they fairly take possession of a hollow tree, there is great difficulty in recovering them. If the queen can be secured, the rest will follow, and the thing is done; but, as she generally hides, when disturbed, in some crevice, it may happen that, after securing the bulk of the bees with much difficulty, it is labour lost for want of the indispensable head, and they all fly back to rejoin her. In one such case, in 1861, after many efforts to secure the swarm, the owner wisely left it till the autumn, and then cut down the tree (a mountain ash), sawing through the trunk above and below the combs, when he removed the "hive" to his apiary, thatched it over, and it still remains there. It is nearly four feet high, by one foot and a half thick. It swarmed twice the following year, but in the winter was destroyed by mice. In the summer of 1863, a vagrant swarm took possession of it, which after swarming twice in 1865, is still a strong stock. The combs being new when first taken, it required very careful handling to cut down the tree and remove the heavy portion of the trunk without injury. A similar case once occurred at Nantwich, but being an old colony, the combs were conveniently thick and tough. A correspondent of the *Journal of Horticulture* states that when he was a boy at the Acton Grammar School, a colony existed over the church porch, the bees passing in and out between the cracks in the stone-work. Being recently in the neighbourhood, he visited the church, and to his amazement found bees passing in and out precisely in the old fashion, after an interval of twenty-five years, during which time, so far as could be ascertained, there had been no interregnum. When bees have plenty of room, as in the case of house roofs and the like, and are unmolested, they become unusually powerful colonies, and are sure to draw swarms from the surrounding apiaries. For by some curious influence, stocks or swarms that are already of disproportionate strength, will be sought out and joined by others. And even if such a stock should be

smoked out, or be destroyed by the cold of a severe winter, yet if combs have once been built, and the place remains accessible, another swarm is sure to take possession, no matter how often the combs are destroyed. They are very difficult to remove from these places. The following incident, related by Mr. S. Bevan Fox, reads like one of Sydserff's experiences :—

“A gentleman in Ireland, a kind friend of mine, once asked me to remove an immense swarm of bees which had taken possession of a square open hole outside his stable wall. He had caused a front of wood to be fastened up against the open space ; but as the roar of the bees was so plainly heard inside the stable, he was afraid of his horses, and wished the bees to be removed. Having properly protected myself with a bee-dress and thick gloves, I removed the board, which exposed an aperture about one foot square, by perhaps nine inches in width (?) depth). This was literally filled with bees. They were quickly brushed into an empty hive and tied up, and I hoped that the queen and the entire swarm were in my possession, the owner having given them to me, if I could carry them off. But great was my disappointment when information came from the stable that the roar of the bees was to be heard louder than ever.

“The true fact now dawned on my mind. The bees so lately secured did not constitute a swarm which had taken possession of the recess, but those clustering out from a colony which had its quarters in a narrow space between the ceiling and the floor of the loft above. The noise almost exceeded belief, and extended back for many feet, seeming to show that the combs occupied nearly all the space between the joists, running across the floor. . . .

“After the foregoing operation, my host informed me he had something else to show, and we ascended to the leads of the flat roof of his house. He asked me to look down one of the chimneys, and a curious but beautiful spectacle met my view. At about fifteen inches from the top of the chimney, which in that part was about one foot square, a swarm of bees had taken possession, building combs diagonally across the open space. The upper edges of the combs were totally unattached to any substance, so that the bees must have commenced building on the perpendicular brickwork of the chimney ; yet were they most singularly regular in form. The bees were very thickly clustered level with the upper edges of the combs. The covering from rain or air was very imperfect, being a piece of slate which but partially closed the aperture, and which was put on after the bees had constructed a large quantity of combs. This strong swarm I was also asked to expel from its stronghold, and an early day was named for the purpose, but before that day arrived my kind friend died suddenly while walking over his grounds, and I never knew what was done respecting these two colonies of runaway bees.”—
May 27, 1863.

The parent hive sends out scouts some time before the swarm comes off, in order to select a suitable place for the new colony. This has been observed times without number, especially in the case of house-roofs, where parties of two or three have invariably been the precursors of a swarm. This is probably not an invariable proceeding, but when neglected, and so left to their own natural instincts, it is generally the case. Hence, in out-of-the-way places, and among ignorant bee-keepers, swarms are much more frequently lost, than when properly cared for. A swarm rising high in the air, and fairly started, is a vexatious thing to see, and not a moment must be lost in endeavouring to bring it down. Various expedients have been tried, especially that oldest of all, of throwing dust or small stones among them, or a jet of water, if by rare chance the hose lies near at hand. The report of a gun, probably from concussion of the air, is sometimes effectual, and Mr. Langstroth mentions the odd practice of flashing the sun's rays upon them by means of a looking-glass.

The distance they will sometimes travel to a new home is considerable, examples of from one to three miles having been observed. It is much easier to prevent than to follow such a flight, and with ordinary attention these losses will be rare. Indeed, the new doctrine is that swarms may be made to alight almost at the will of the owner. It is certain that they are attracted by anything dark-coloured at all resembling a cluster of bees, and some persons regularly provide decoys at swarming time—a piece of black cloth, or an old hat, which is tied upon a rod, or round a convenient bush. Another contrivance consists of strings of dead bees, threaded on, and then secured to a stake. This is a Yankee device.

The swarm, headed by the old queen, consists of both old and young, and both drones and workers. A good swarm will weigh five pounds, which represents about 25,000 bees. Occasionally seven and even eight pounds is reached, and there is an instance of a *second* swarm weighing eight pounds three-and-a-half ounces. The offshoot becomes, by the act of swarming, so completely independent, that however near it may be hived to the parent stock, not a bee will enter the hive that has hitherto been its home. This separation seems to be at first the voluntary act of the seceders, but after a few days the estrangement becomes so complete on both sides, that it would be death for one of either community to enter the home of the other.

The first duty of the new settlers is to furnish their empty

dwelling. Being gorged with honey they are provisioned for three days, and therefore have no immediate disquiet on the score of food. The food thus stored is about to take visible shape. The bees hang clustered together in a dense and almost motionless mass, raising the temperature to about ninety degrees, partly by the actual crowding, and partly by rapidly-increased respiration, by which they can raise the heat of the body at will. The heat, and perhaps in some degree the quietude also, promote the secretion of wax, which at the end of sixteen or eighteen hours shows itself protruding in exquisitely thin plates from the abdominal pouches. Before this the cluster has somewhat dispersed, a portion of it forming in strings or chains in all directions, the bees at the top clinging by their fore-legs to the ceiling of the hive, their hind-legs hanging down. Upon these members other bees lay hold, leaving a similar legacy to their descendants. In this way strings or ladders are formed, reaching from the ceiling to the floor, festoons are also formed of two ladders joined together at the bottom, and hanging free. Up and down these living staircases the wax-workers and the foragers travel. The strain upon the topmost bees must be enormous, yet nothing can induce them to let go their hold. A somewhat similar sight may be seen during the operation of driving. For the bees will often form strings over which others will pass quickly; often also a bee may be seen dragging itself along very slowly, and with difficulty, being impeded by one or two others who are clinging to its hind-legs.

After the lapse of eighteen or twenty-four hours, comb-building commences. "And now the bee-architect steps forth. Great bee! it is his glorious task to shape out the design of the first combs, and to lay, as it were, the first stone of the structure, tasks always performed by a single bee." The text-books must relate in detail how this first worker withdraws a single scale of wax from its pouch, passes it through the jaws, moistens it with a peculiar secretion, and then passes it again through the jaws, kneading it as a baker kneads his dough, and with a similar result, making it tenacious and ductile. Each scale is fixed, in combination with others, to the roof, forming one straight line, and when the workman has exhausted his material, he departs and makes room for another. Then the sculptors appear, and they hollow out the somewhat crude mass of wax, forming with much labour the pyramidal crown of the cell, after which another set commences in the same way on the opposite side. Other wax-

workers, meanwhile, extend the central wall in both directions, while every additional cell traced out allows a fresh set of labourers to join their forces. The cell-walls are gradually built up as the central partition proceeds. When the first comb has progressed a few inches, preparations are made for two more, one on either side. It is necessary to allow room for completing the cells in depth, and for a passage between each comb, and this is calculated with tolerable accuracy before the work is commenced. It is true that in the round-topped hive the combs at first often approximate too closely, but as the shape of the hive expands they take their proper distances, and may occasionally be found as regularly placed as though worked to a scale. If there were not this strict and careful arrangement, and if, instead, all the combs were commenced simultaneously, some would be too near and others too far apart; space would be wanted, and even the safety of the hive endangered; and the mischief once done would be irreparable. On the contrary, of all the work performed by these insects, this of comb-building, which is the most laborious of any, is also the most perfect. If it were performed in the full light of day, it would be a marvel of skill never to be sufficiently admired; but that the work is completed in total darkness, and solely by the sense of touch, heightens the marvel, if that were possible. The queen often commences to deposit her eggs before the cells are completed, leaving the walls to be built up afterwards. A swarm works far more briskly than an old stock. There is a conscious struggle for existence, which impels to the most untiring labour. When honey is abundant and the weather favourable, a strong swarm will fill a hive, say of thirteen inches square by nine inches high, with comb in a fortnight, and another week will see it pretty well stored. A swarm in a chimney filled a space of three feet by seven inches by six inches completely with honey in three weeks. Indeed, the shrewd Yorkshiremen get more super-honey from swarms than from parent stocks; and, contrary alike to the Southern and the Scottish practice, they super a swarm in two or three days after hiving, thus prolonging the interval of extreme activity, which continues so long as the hive itself is lightly stored. As soon as the hive begins to fill up, the industry of the workers sensibly diminishes. Foraging is no longer carried on with the restless eagerness of the first two or three weeks. For this reason the practice of early supering we take to be sound, always provided that the season is a favourable one.

Occasionally, but very rarely, a swarm does itself throw a

swarm ; which is called a maiden or virgin swarm. There is a popular idea that these are more valuable than any ; but the contrary is the fact. They are not as large as a first swarm, and they come so late that there is not time to get their combs worked down before the honey season is over and work ceases. They require liberal feeding in order to do well.

Before leaving this slight and very general description of the interior history of the hive, it may be well to recapitulate its main features, especially as it has been found impossible to give a continuous narrative of operations. The hive, which may be of any age, from one year to ten, is supposed to be filled with comb, and at the end of the previous summer was well stored with honey. But as this has been fed upon by the bees during the autumn and winter, there will be but little left by the end of March, and most probably artificial food will be required to help it out. As soon as the crocuses and palms are in flower, the bees carry in pollen, and the queen commences to lay eggs. As spring advances and the temperature rises, and flowers become more plentiful, the rate of laying increases. Towards the end of April honey is being gathered freely, and early in May, being more than the daily wants of the hive, is being rapidly stored. Drone eggs will have been laid, and towards the middle of the month the drones will begin to fly. The laying of the queen now reaches its maximum, probably 2,000 eggs in the twenty-four hours, and every available cell is occupied. Towards the close of the month royal cells are formed, and if the weather be favourable, and the hive be prosperous, a swarm will come off, leaving the hive weakened in numbers and without a monarch. The number of young bees hatching out each day quickly replenishes the population, so that after the eldest princess appears, there is often a sufficient number ready to join her in founding a second colony. As soon as swarming is over, and the young queen commences her duties, the drones are killed off, and the parent hive, if not over-depopulated by excessive swarming, recruits before cold weather sets in. The approach of frost drives the bees closer together, so that the outer combs will be quite deserted. In this half-dormant state they hang densely clustered together, and consuming but little food. On warm days the cluster spreads, and many bees fly out in order to cleanse themselves, crowding together again between the combs as the temperature falls. In the meantime the swarms thrown off have lost no time in secreting wax and building combs ; working with extraordinary diligence until a sufficiency

of honey has been stored, and the hive made safe for the winter.

We thus see that the hive-bee, unlike the wasp, the hornet, the humble-bee, and some other insects of the same order, exists throughout the winter as a community, and consequently starts in the spring from a point which wasps and other insects only overtake at the close of summer; that its numbers increase with great rapidity, being greatest at the time of the greatest abundance of honey, and that its instincts compel it to collect and store the nectar as long as there is any to gather, or room to store it in. These being its natural habits, the object of bee-husbandry is to develop these instincts, for the advantage of the owner, to the utmost limits consistent with the safety of the hive. It must be confessed that the English cottager, who owns four-fifths of the English hives, is far behind the Germans, the Americans, the Scotch, and the small but skilful and intelligent section of his own countrymen who devote attention to the subject, and that he stands pretty much where his elders did a century ago. The universal apparatus is the dome-shaped hive of the old story-book, Dr. Watts' moral songs, and time immemorial. This is set upon a stone slab, which is hot in summer, and in winter is not only cold but damp, and not only damp but wet, and most unhealthy and wretched. There is little or no feeding in the spring, and many stocks perish in March after having got safely through the winter. Early in September, for it is rarely sooner, when the hives are taken up, the swarms are kept and the old stocks taken,—a double mistake, since the swarm contains the old queen, whose best days are probably over, while the old hive has now a young queen at its head; moreover, the swarm is furnished with new comb, which can be only slightly discoloured, while the old hive contains dark comb and abundance of old pollen, and the honey is consequently highly coloured and still more highly flavoured. Very light hives, and nearly all second swarms are taken, because they will not keep through the winter, affording probably no honey worth speaking of, while the hive is half full of comb, which in all probability will be melted down. This comb is far too valuable to be thus thrown away, and if kept uninjured in the hive, would give a swarm a capital start in the following year. And then, in any case, the bees are destroyed, instead of being joined to other stocks, where they would often be invaluable; so that the process is ingeniously wasteful in every particular. Great efforts have been made to introduce a better system;

and Mr. Cotton, especially, by the plain, sensible, and quaintly humorous letters which he wrote for distribution among cottagers, has done his work as no one else would have done it, and yet the result is small. Here and there in certain districts a better system prevails; that is to say, an improvement in some one particular, perhaps in the increased size of the hives, or in the use of wood instead of a stone rest, or in the saving of the bees of condemned stocks. But, as a rule, a bee-keeping district is not characterised by an intelligent study of the subject, and a mastery of true principles, but is simply a district where an unusual number of hives are kept on the old system, or with trifling modifications of it.

It is far otherwise in Scotland, especially in Ayrshire, Lanarkshire, and Renfrewshire, where they have a sound system, an intelligent application of it, and an amount of traditional bee knowledge, that is fifty years in advance of the same class of English bee-keepers. The Stewarton hive, which is the typical Scotch hive, consists of a series of octagonal boxes, fourteen inches in diameter and six inches deep. According to the newest pattern each box contains eight bars; the two outer ones, slightly wider than the rest, being generally occupied by pure honeycomb, in which the cells are deeper than those of the brood combs. The space between each bar (seven-sixteenths of an inch) is occupied by a wooden slide, which can be drawn at pleasure, so as to open a free communication with the box above it. The swarm is secured in two of these boxes, constituting a hive of fourteen by twelve inches to begin with. As soon as these are filled with comb, another box is added below (a nadir), and it is expected that these three boxes will be filled so as to stand over the winter. In the following spring a top box (super) is given, communication with which is made by withdrawing the outer slide on each side, so as to prevent the queen from ascending, as she rarely travels to the outermost combs. As soon as the super is well filled, a fifth box is given below, with free communication. As the work proceeds, another super is given above the first, and when the first is completed, and all the cells are sealed over (a window in each box allowing partial inspection), it is removed, the super above it takes its place, and a third empty super takes the place of the second. In this way the lower boxes form an immense breeding hive, freely communicating throughout, and the topmost boxes are confined to the reception of honey, freely communicating with each other, but shut off from the brood hive, except at the outer passage on each side. Such a pile of boxes, a yard or more in height,

will weigh thrice as much as an English hive, and will furnish in a good season sixty or seventy pounds of pure honey, without interfering with the stock hive at all. Such a hive, if taken in the English method, destroying the bees, and appropriating the entire contents, would give more than one hundred pounds of honey;* whereas it must be a first-rate English hive to give forty pounds of honey; and there are very few that give thirty pounds, to say nothing of the destruction of the stock. On the other hand, the swarms must be considered a partial set-off, as swarming is for the most part prevented when the Stewarton system is carried out to the full. A comparison between the results of the two systems as to the weight of honey, is at least in the proportion of two to one; probably, taking the general average, as three to one. There can be no question that small hives are bad economy. The queen is just as well able to fill a large hive as a small one, and an immense addition of working power is thereby gained at a small additional cost. For a certain amount of work has to be done in every hive before an ounce of surplus honey can be stored; therefore, beyond a given number every additional worker is a clear gain. It is like a business in which the percentage of profit is of necessity very small. The only way to make it pay is to increase the return. The working expenses are so much, be the return large or small, so that beyond a certain point every item adds to the account of profit. Small hives cramp the energies of both queen and workers. There is not breeding room for the one, nor storing room for the others, and after wasting their time in compulsory idleness, they are driven off to seek fresh quarters much more frequently than is desirable. These swarms, too, are not more than half the size they should be with good management; and small colonies are wasteful.

Twenty years ago there was a strong prejudice in favour of the collateral, as opposed to the storifying, system. Of this, Nutt's hive was the best example; indeed, all others are only a modification of it, and by no means so successful. It consists of a central hive, which he fancifully calls "the pavilion of nature." This is on no account to be disturbed. On either side a box or wing communicates with the pavilion, which communication can be cut off at pleasure. By means of movable ventilators, the temperature of these side apartments can be raised or lowered at pleasure. His theory is, that by keeping down the temperature in the side boxes, the

* In 1865, a hive at Carlicke, in Lanarkshire, gave 328 lbs. all told.

queen will be prevented from entering, consequently that the combs will contain no brood, but pure honey only. One box is to be used at once, the other being held in reserve, to be occupied only after the removal of the first. He held that the store-room being, so to speak, on the ground-floor, instead of at the top of the house, there would be a great saving of time and labour to the bees, and an equivalent increase in the amount of honey gathered. Also, that they work with greater comfort in a temperature many degrees lower than the brood hive. We cannot but consider the collateral system as a mistake, and opposed to the natural instincts of the bee. Setting aside the frequent choice of a hollow tree, or an unused chimney by escaped swarms, who thus show a preference for a long and narrow hive whenever available, we may take the evidence furnished by the comb itself. The rule invariably is "honey above, and brood below," which is true of every comb in the hive, the outer comb on each side, perhaps, excepted. But even here, in populous hives, the inner side of each will have its full share of brood. And if the experiment be tried of removing a strong stock into a wider box, say from a ten-frame to a twelve-frame hive, the additional outer combs will be occupied in the same way as before, the two previous outer combs now carrying their full proportion of brood on both sides; whereas, in such a case, if the collateral plan were in accordance with the creature's instincts, we should expect to find the brood carried upward in the middle combs, and the additional outer combs now given, occupied solely with honey. As regards the temperature of the side boxes, Nutt very properly insists on the temperature being kept up until the combs have got a thorough start, when the ventilators are to be gradually drawn. But the secretion of wax is mainly a question of temperature, great heat being required in order to elaborate it, and this heat is created when needful by the bees themselves. Lower the temperature and you render the secretion difficult; lower it still further and you render it impossible. The process of comb-building is the same whether in the honey-box or in the stock-hive, and can only be accomplished under favourable conditions. At a reduced temperature, progress must at the best be slow, and even were the "ground-floor" theory correct, as much would be lost by the slower secretion of wax as would be gained by the more rapid storing of honey. But the representation that the labourers in a storified hive are like workmen who carry their burden up ladders, or up two or three flights of stairs, instead of depositing it just within the

door, is an obvious fallacy, if for no other reason than that a man goes on two legs, while a bee goes on six. Suppose we put the converse of this, and say it is easy for a man to climb a ladder, therefore it is easy for a dog or a donkey to climb a ladder. It is rather more absurd, but is equally good logic. Bees like to ascend. Their motto is most assuredly "excelsior." They run much more nimbly up an ascent than upon a level; and so far are the Americans from considering climbing a hardship, that many of their hives have the alighting-board a foot square, and placed at a very steep angle, so that the bees have almost the height of their hive to climb before they reach the entrance. Without wearing wings it would be difficult to speak positively; but bees always appear to carry their load more easily climbing than flying, and especially when carrying pollen. The burden of honey is differently placed; but the pollen seems decidedly out of the centre of gravity, and to *drag* during the flight, an idea which the frequent exhaustion of the little foragers seems rather to strengthen.

But experience is the true test of the relative value of the two systems. Nutt professed to obtain from the collateral plan, results altogether without a parallel in those days. We say "professed," for the truthfulness of his statements has been seriously called in question; indeed, some of his statements carry their refutation on the face of them. It is painful to have to speak thus of one who certainly must take high rank as an apriarian, and whose name will always be associated with "humanity to the honey-bee." But his figures have long been a stumbling-block to beginners, and the book ought only to be put into their hands with a suitable caution. Nutt's hive is still in partial use; and with an exceptionally strong stock and a young queen, the results are often good, say thirty to thirty-five pounds of virgin-honey. But it is expensive in the first instance, and requires some care in its management, and the question always arises whether superior results would not have been got on the storifying principle?

When we come to what is not very happily called scientific bee-keeping, of which the bar-and-frame hive is the principal feature, it is evident that we make a great step in advance, and enter on an entirely new era. The Greeks have certainly for two centuries, and probably for a much longer period, made use of bars across the top of their hives, to which the combs were attached singly, so that any comb might be removed at pleasure. The practice was introduced into France in 1754, but without any great success. It was taken up by

Keys, Wildman, Huish, Golding, and other famous authorities, who held to it tenaciously as correct in principle, though the results were very uncertain. Therefore when Dzierzon adopted it in 1838, he made use of an old and well-worn instrument. The novelty in his case was in the mode of using it. Instead of employing it simply for the removal of surplus honey, he made this quite subordinate to the multiplication of stocks, the renewal of failing queens, and an occasional but thorough inspection of each hive. In 1845, he published an account of his system of management, and the improvements which long practice had suggested in his hive. He said that he was in the first instance driven to a change, by the misfortunes which followed the old system, and made him despair of success. Though "misfortunes" still followed him, as he had about seventy colonies stolen, sixty burned by an accident, and twenty-four carried away by a flood, yet in eight years his stocks had increased from less than twenty to 360, yielding thenceforward an enormous weight of honey annually. Still the hive had many imperfections. It opened at the end, presenting only one comb to the operator, so that to reach say the fifth comb, the four which preceded it had all to be removed. Moreover, the combs being attached to the sides of the hive, had to be severed before they could be lifted out, involving loss of time, waste of labour to the bees, waste of honey to the owner, and a constant liability to accident. The Baron Von Berlepsch, a friend and coadjutor of Dzierzon, a year or two later conceived the idea of suspending not merely a simple bar, but a quadrangular frame, within which the comb would be constructed, and which would be removable instantly and at pleasure. The success of the experiment was complete, and the frame has become an indispensable piece of apparatus. Singular to relate, while the Silesian pastor and his friend were perfecting their system, an American clergyman, in feeble health, was devoting his attention to devising some improved method of bee-culture; and without having heard so much as the name of the great German apriarian, or any report of his doings, had nevertheless perfected a hive on precisely the same plan. Each one worked out the problem independently of the other, and they arrived at the same result, though by somewhat different ways. Without distinctly giving Mr. Langstroth the precedence, it is only right to state that he, single-handed, produced a hive equal in all respects to that of the two Germans united, and certainly more convenient to handle. Berlepsch claims the priority of invention, Mr. Langstroth priority of publication,

and this would decide the question did not the Baron maintain that his system was known to others, and in that sense was published first.

Both hives are furnished with a rib or ridge on the under side of the bar, as a guide to the bees in constructing regular combs. The credit of this contrivance, however, is due to our own countryman Hunter. His words are explicit; he says: "It is necessary to give them a lead or direction; therefore it is proper to make a ridge along the top (of the unicomb hive) from end to end, in the centre between the two sides, for they like to begin their comb from an eminence. If we wished to have them transverse or oblique, it would only be necessary to make transverse or oblique ridges in the hive." And again, "They generally may be guided as to the direction of their new plates of comb, by forming ridges at top, to which they begin to attach their comb." It is only right that this should be distinctly stated, for very few even of English bee-keepers are aware of the fact, and on the Continent, Hunter's name even in connection with much more important matters, is passed over altogether.

A further improvement has been made in these hives by Mr. Woodbury, our English Dzierzon; the bar and frame being compound, and available either together or separately. Thus the stock hive is fitted with the bar-and-frame, while for the super, bars only are used, and the combs may thus be of any depth, or the supers may consist of two or even three stories, but any bar, carrying the comb with it, will fit any frame throughout the apiary. This is a very pretty contrivance, and in skilful hands becomes most valuable. There are various modifications of the principle in use, the difference being chiefly in the respective dimensions, some supposing that the size of the Woodbury hive is better adapted to the prolific Ligurians, and the longer honey season of Somerset and Devon, than to the comparatively scanty harvest of the northern counties. Some prefer more shallow combs, and a greater number of them. These are matters of individual judgment. But in all the result is the same; namely, that the operator has perfect control over every comb in the hive, and that as all his hives are of the same pattern, any comb is changeable at pleasure with any other comb in the apiary. By this means the owner need be in no doubt as to the condition of any of his hives. If a stock be weak it can be strengthened by the addition of one or two combs of brood. If during a mild winter or a late spring a stock is running short of food, instead of perishing miserably, as hundreds of

hives do every year, the fact is ascertained and the necessary supplies furnished. If a queen is missing, the want during the summer months can be readily supplied. Stocks can be artificially multiplied with extraordinary rapidity; of which Dzierzon's own practice is again the most remarkable. For, when in 1848, subsequent to the date already mentioned, his stocks were reduced from 360 to *ten*, he increased them by the autumn of 1851 to nearly 400! This system does away with the uncertainty and loss of time which attend natural swarming, when the bees often lie out by thousands for days together: and also with the interregnum of three weeks, more or less, which occurs in the old hive after swarming, during which no eggs are deposited,—and this valuable time is saved just at the height of the honey season. Put into figures, the number of bees lost in this interval under the old system, is from 15,000 to 20,000, or an entire swarm. It also does away with the loss sustained by swarms escaping, often three or four in one apiary, and as many as thirty in one neighbourhood. All spare combs can be utilised, the bees quickly fastening them into the frames. Comb-building is a slow and very expensive process, and if a hive can be furnished or even partially furnished with combs, it is amazing what the energy of a strong swarm will accomplish. The queen is not checked for a single day in her egg-laying, and the whole strength of the hive is available for gathering honey and nursing the brood. Then again, accidents can be repaired, which would be utterly hopeless in any other than a frame hive. Those who have been so unfortunate as to see a cottage hive break down in hot weather by its own weight, and have witnessed the destruction of combs and brood which followed, will be painfully aware of the difference. On the one hand, the utmost that can be done is to fix portions of the brood-comb into bell glasses, and placing these over one or more hives, let the bees hatch out what they can. But even this can only be done in a flat-topped hive. With one of the ordinary cottage pattern, one glass alone can be thus treated, and then only by some ingenuity in the fixing. On the other hand, with frames, every piece of the broken comb can be rendered available, and neither brood nor honey will be lost. Of course some skill is required to accomplish this, but one great charm of bee-keeping on this system, is that it gives such free scope to the owner's ingenuity. An example of this is given in the following history of a breakdown, which was not only complete in itself, but had the disadvantage of happening in the winter.

During a very high wind at the end of November 1864, a bee-shed had been overturned. The thermometer was below 40 degrees, so that to open the hive was to ensure the certain destruction of the bees. The hive itself revealed nothing externally, and to lift it from the floor-board was to incur the risk of broken combs falling through, and thus increase the mischief.

"It was necessary, however, to do something, and accordingly I began by inverting and replacing gently and gradually, and with the least disturbance possible, the overturned box in its proper horizontal position. I then carried it to a room raised by a small fire to a temperature of about fifty degrees, and placed it on a chair close to the window, allowing any bees that chose to come out and fly against it.

"My next act was to unscrew the crown-board, slightly raise it, and with a puff from my cigar send the bees helter-skelter down amongst the frames. But what a sight for a compassionate bee-master presented itself when the crown-board was removed and the interior of the hive exposed to view. The floor-board was swimming with honey, hundreds of the poor bees were drowned in it, and many of them also were crushed between the combs, which lay broken and piled against each other like the tilted strata of geologists. Every comb had parted from its frame, and altogether the pounded-looking mass was a piteous spectacle.

"Furnishing myself with a goose feather and a spare Woodbury hive containing only one frame and comb, I commenced operations by putting into it a small piece of comb covered with bees, gently lifted from the ruins. I then removed the frames and pieces of comb in succession, brushing off the bees with a feather into the spare Woodbury box. The combs and frames, when cleared of the adhering bees, were set aside, and in a short time the operation of transferring all the bees from their original domicile to the spare box was completed. The emptied stock-box, with its floor-board, was then washed and dried. My next step was to nail slips of wood one-eighth of an inch in thickness by half an inch in breadth along one side of each frame from top to bottom, placing the slips about two inches apart. I then laid the frames on a newspaper, the slips being under, and placed the broken combs upon the slips, making the junctions as neat as possible, and keeping the comb close to the top bar. These broken combs I secured by slips laid over them, and nailed to the top and bottom bars, nearly opposite the other slips. The combs thus encased, though broken into many pieces, could not get out of position, and might readily be handled by the frame. As soon as I managed to get the frames refitted with comb in this manner I returned them to the original box; then taking the spare box containing the bees, I placed it over the frames, and swept the bees down between them, and afterwards replaced the crown-board.

"During the operations many bees flew against the window, and fell down benumbed; these I now carefully gathered into a wide-mouthed

bottle, and revived by the application of gentle heat, pouring them, as animation returned, amongst their fellows through the central hole in the crown-board. I did the same with those which had been bedaubed or drowned in the escaped honey; and I believe I do not go beyond the truth when I say that the whole remedial process did not entail the loss of a dozen lives, and it was accomplished without either hands or face being in any way protected. An occasional whiff from a pipe or cigar was all that was needed to subdue their resentment whenever any bees showed a disposition to revenge what they could not but regard as insulting.

"In less than a fortnight I had the satisfaction of seeing the whole of the broken combs mended, and firmly fastened to their respective frames, and the hive again in almost as flourishing a condition as it was before it met with the accident. As the slips of wood were no longer necessary either to support or keep the combs in position, I brought my hive once more into the house, took out the frames, and removed the slips."—*Journal of Horticulture*, Jan. 10, 1865.

We imagine that no one, and certainly no apiarian, can read this account without a feeling of admiration akin to that excited by a first-rate surgical operation. It was a critical bit of work, skilfully, and neatly, and safely done.

The bar-and-frame principle allows of ready arrangement as an observatory hive, in which the proceedings of the queen and the whole management of the bee-community are laid open to view. Several plans for an observatory hive previously existed; but when they contained anything beyond a single comb, they were difficult to arrange, and very uncertain in their working. Here the frames, complete with combs and bees, need only be lifted out of the box and placed in tiers in the glass observatory, to be moved back again in the autumn.

But the chief value of the invention lies in the facility which it gives for removing aged and failing queens, and raising young queens, and consequently of forming artificial stocks at pleasure. This class of operations is nowhere so well seen as in Ligurianising an entire apiary from a single Italian stock. This can be accomplished in several ways, the following being perhaps the simplest. The Ligurian stock is encouraged, by small but regular supplies of artificial food, to increase the population as much as possible, and to produce early drones, which latter result is promoted by inserting drone-comb in the middle of the hive. When the drones begin to hatch out, a comb containing eggs and young larvæ, or, if they can be spared, two such combs, with the bees clustering upon them, and a sealed honey-comb, are put into a nucleus box holding three frames. This box is removed to a distance, so that the bees may not find their way back to

the hive, or if that is not practicable, it is put in a cool and dark place for twenty-four hours, at the end of which time royal cells will have been commenced, and the box may be placed in the apiary. A day or two after the cells have been sealed over, the queens of a certain number of black stocks are searched for and destroyed, and one of the Ligurian cells, having been carefully cut out, is inserted in each hive. In a few days an Italian princess will be at the head of each stock, and must take her chance as to meeting with an Italian consort or not. But whether her progeny be pure or hybrid, yet, for reasons already given, her drones will be pure, even if the workers be hybrid. Consequently, the second year, Italian drones will be abundant. The process is then repeated, all faulty queens are removed, new cells are inserted, and in due time, if there are no black bees in the neighbourhood, a pure progeny is the result. But although sure, this is a slow process, requiring two summers for its accomplishment, so that some apiarians take the trouble to cut out the whole of the drone-comb from their black hives at the beginning of the season, so as to insure only Ligurian drones, and if there are other hives within two miles they remove the Ligurian stock, and such as are to be operated upon, temporarily, to a distance. Indeed, for many reasons it is convenient to have the apiary thus divided, and remove or exchange the hives as occasion requires. Enough, however, has been said to show how absolute is the control which the new system gives, and how effective an apparatus it must prove in competent hands.

A very simple operation suffices to place the inmates of the most inaccessible-looking cottage-hive under the same control, though the transfer of bees, with combs and brood uninjured, from a round to a square dwelling, seems at first sight a piece of legerdemain that would puzzle Stodare himself. The cottage-hive is lifted from its stand in the middle of a fine day, when the bees are in full flight, and is steadily inverted upon a bucket. An empty hive of the same diameter is set over it, and a bandage securely tied round the point of junction. Another empty hive is put on the stand to amuse the bees returning from the fields, and keep them on the spot. The united hives are then removed to a little distance, and the operator commences to drum on the lower and full hive. The inmates, alarmed for their safety, begin to fill themselves with honey, and in about ten minutes an uproar commences that tells they are already on the move. Bees cannot bear the slightest jarring or vibration of their combs, and when this is long enough continued, they leave them for the more stable

resting-place which is afforded by the upper hive. There is a certain knack in driving bees, as there is in most things, and which only practice can give. It is with bees as with dogs and horses, only firmness and decision can give perfect control. Sometimes the bees cannot be got up within an hour, or even more, and sometimes they cannot be got up at all. But with a practised hand twenty minutes will generally suffice for the entire operation. When they have fairly begun to ascend, the head-dress and gloves may be thrown off, the wrapping removed from the hives, and the upper one tilted up, so as to watch the process. Indeed, some apiarians prefer the open system of driving from the first. The drumming must be kept up until the combs are clear of all but a few stragglers, who refuse to quit on any terms. The hive containing the bees is then gently lifted up, and placed on the old stand, the decoy being taken away. The combs are then as quickly as possible cut out of the original hive, and fitted tightly into the frames; or where they cannot be cut of sufficient size to fill them, are tied in with splints and tape, or wire. At the same time a sharp eye is kept on the stragglers still loitering about the combs, lest, as sometimes happens, the queen, like the captain of a ship in distress, should be the last to leave. The frames thus fitted are successively placed in the new box, which is then taken to the stand; an assistant lifts up the hive of bees, and as soon as the box is in its place, knocks them out by a smart blow, when in a few moments they run down among the combs, recognising their old home in a new form. The crown-board having been quickly replaced, the bees are left to their own devices. In a couple of days they will have fastened the combs into the frames with propolis, after which the operator takes out and examines each one, removes the splints and bandages, and corrects any irregularities. In two or three weeks the attachments will be properly worked in wax, all damages repaired, and blanks filled up; meanwhile, the hive works in the super with great briskness, and appears to have received a strong impetus from the change of quarters.

The frame-hive appears to quite as great advantage in obtaining an increase of honey, as in an increase of stocks. Both cannot be had from the same hive, at least not to any great extent. "Ten pounds and a swarm" is a very good result, the honey being stored in glasses. But it is much better economy to set apart certain stocks for honey, and certain others for increase. When the former is the object, and the stock strong, abundant store-room is given, so as if pos-

sible to prevent swarming. A stock so treated becomes, as to population, a double hive, with proportionate results. The work of comb-building, which goes on so slowly in glass-supers, where the material is unfavourable, and presents curves on all sides, is performed with wonderful rapidity in bar-supers, the comb being built in straight lines from end to end, instead of in a series of short combs of irregular proportions, as it must be in the former case. There is no question that, weight for weight, at least two combs in frames will be made, filled, and sealed, for one in glasses. The disadvantage is that such combs can only be preserved in large boxes, and from their size and shape are not presentable at table. The honey must, therefore, be run from them, and so is less valuable. One shrewd apiarian, not a Scotchman, nor yet a Yankee, has hit upon the device of slicing off the covers from the cells, and after draining off the honey, returning the combs to the hive to be filled a second time! The experiment is said to have succeeded perfectly.

It may be interesting to note a few cases of extraordinary yield—but first of the rate of increase in a good season. On the 18th of June a swarm weighing five pounds was put into a hive of clean combs; the increase of honey for the three subsequent weeks was as follows:—

					lbs. oz.
June 18 to 23 inclusive					5 0
" 24 to 28 "					5 4
" 29th only "					2 0
" 30 to July 1 "					2 0
July 2 to " 8 inclusive					2 12
" 9th only "					2 12
" 10 to 12 "					3 12
Total					23 8

This swarm averaged for the three weeks rather more than one pound per day, but on the 9th of July as much was gathered as during the whole previous week. In another case a wooden super was placed upon a stock hive on the 4th of June; and on the 12th of July, six weeks and three days afterwards, the box contained $68\frac{1}{4}$ lbs. of pure honey, averaging for the whole period more than a pound and a half per day. Another stock, in a collateral hive, furnished in the same time two boxes containing 49 lbs. and 38 lbs. respectively, or very nearly two pounds per day. A hive in our own apiary supered on the 12th of June, gave between that date and July 7th, 43 lbs. of pure honey. This makes

an average of a pound and three-quarters per day. From 1½ lbs. to 2 lbs. per day appears to be the maximum attainable by strong stocks in a good season. The most extraordinary examples of success are furnished by Mr. George Fox, of Kingsbridge, Devon, universally noted for his skilful management. In the summer of 1863, he took from three hives, one of them an ordinary cottage, as follows. From the cottage straw, a glass super weighing 109½ lbs. net; from a plain wooden hive fitted with an adjusting super, 112 lbs.; from an octagon glass stock-box, bees driven out, 82 lbs. 14 oz.; that is to say, nearly 300 lbs. of perfect honey combs from inexpensive hives. In the two former cases the stock hives, of course, still remained untouched, and amply provisioned; in the third the hive itself was taken. For these three supers the large sum of £40 was offered, but declined. This ingenious apiarian stands unrivalled for the size of his supers, and attributes much of his success to his plan of making the super movable. It is made with much nicety, so as to slide over the hive like a close-fitting cover, and is at first raised three or four inches only, and afterwards raised a few inches at a time, as the combs progress. The bees are thus craftily lured on, and at the same time are saved a considerable distance in the carrying of their loads. Some of the combs in these supers have been nineteen inches in length, and would weigh about 20 lbs. The principle was first adopted by him in 1851, and a super of 68 lbs. speedily rewarded his ingenuity.

Of course such figures as these are exceptional, and even in the same apiary during the same season several hives gave nothing at all. An average of 15 lbs. per hive must be considered highly satisfactory if the number is considerable, 20 lbs. being rarely attained. It will generally be found that the bulk of the work is done by a few, and that three or four hives, by their extraordinary yield, raise the average of the whole. And these are generally the stocks that were strong in numbers when put up for the winter, and at the same time amply provisioned. An extra strong stock of this kind will repay almost any amount of care and attention, and it becomes a question whether the union of two strong stocks at the commencement of the season is not sound economy, as it undoubtedly is in the case of weak stocks. Results depend very much upon good or bad management. Districts vary, and the seasons vary, but after all it is with bee-keeping as with farming and with merchandise—appliances are good, labour is better, but it is good manage-

ment that secures success. We know a remarkably fine district which, nevertheless, from a poor system gives poor results. Stocks are starved in the spring for want of a little attention and feeding, there are heavy losses of brood for want of water, and of foraging bees who go in search of it: swarms are lost for want of watching, and so on. This is true, not only in the general, but in particular cases, of which some curious examples might be given.

On the other hand, and in still stronger proof of the value of good management, is the case of Dzierzon, who resides in a poor district, with a light sandy soil, and yet is probably the largest and most successful bee-keeper in Europe. Divided into several apiaries placed a few miles apart, he keeps from three hundred to four hundred hives, and in a single year has realised six thousand pounds of honey, and several hundred-weight of wax. Among other benefits which the good pastor has conferred on apiculture, not the least is the dissemination of the Ligurian or Italian Alp bee. For although the existence of such a bee has been known for several centuries, yet it excited no attention, and it is only since Dzierzon's operations commenced in 1853 that the species has become naturalised in Germany, France, America, and England. At the end of February in that year he obtained a Ligurian stock. This he at once transferred to one of his moveable comb hives, and during the summer removed from it a brood comb every other day, supplying its place with an empty comb. In this way he succeeded in rearing fifty young queens, about one half of which turned out pure. Berlepsch surpassed this feat, for having received from Dzierzon a Ligurian queen, he successfully placed her at the head of a black hive, and raised from her progeny no less than one hundred and thirty-nine queens the same season. Of these about fifty turned out pure.

In the autumn of 1859 a Swiss dealer named Hermann announced in one of the English journals that he could furnish pure Italian queens, delivered safely in London or elsewhere. This attracted the notice of Mr. Woodbury, who lost no time in securing "a yellow ligurish queen," attended by about 1,000 of her subjects. As this was the first arrival of the species in this country, a peculiar interest attaches to the experiment, and we give an abstract of the proceedings. First of all a hive had been furnished with five combs, into which the queen and her little band were introduced. A unicomb hive was then removed from its stand, and replaced by the Ligurian. Many of the workers belonging to the former returned to their accustomed place, but for the most

part were treated as intruders, and as a strong natural antipathy exists between the two races, many deaths ensued. This attempt to strengthen the stock having failed, a black stock was driven out of its hive, the queen removed, and then being knocked out at dusk upon a cloth, the Italian hive was placed over it in the usual way. The union of two stocks is generally accomplished without much difficulty. But the uproar which at first arises, instead of rapidly diminishing, in this case increased more and more, and became perfectly furious. Daybreak revealed a painful sight, which the operator shall describe in his own words :—

“Hurriedly conveying the cloth to a more open space, I mournfully examined its contents. There, beautiful even in death, lay my much-prized ‘yellow ligurish bees,’ some stark and motionless, others struggling in the last agonies produced by the fatal poison of their opponents’ weapons. Never was British valour more completely triumphant—never were foreign invaders more ruthlessly expelled. . . One chance yet remained. It was possible, though it seemed scarcely probable, that the vengeful weapons of the furious Britons might have respected the person of the foreign sovereign, and that, having triumphed over her natural subjects, they might elect to transfer their allegiance to an alien queen, as soon as they had ascertained that their own monarch was irretrievably lost.

“Never did Gaelic clansman or Saxon serf search more perseveringly for the body of his slaughtered chief, or thane, than did I for that of her Ligurian majesty. Cloths were spread around the hive, and every fresh-looking dead bee that could be found in the garden was picked up and carefully examined. One hundred and sixty of the ‘yellow ligurish race’ were discovered, and many hundred common bees, but no queen.”

A few days later the hive was opened, showing many hundred eggs, and finally the queen herself, giving countenance to the fulfilment of the Swiss prediction : “So in thirty days all people would become yellow, and the English bees by-and-bye shall become dead.” The species has now become quite naturalised, and is known in almost every part of the kingdom. Mr. W. Carr, of Manchester, has recently imported not only queens, but stocks, from another Alpine district, and which are an exceedingly handsome strain.

Much, perhaps too much, has been said of the superiority of the Ligurian over our native bee. Hermann especially, who wrote a little pamphlet on the subject in a very extravagant style, attributes to it all kinds of excellencies—and professes to consider a stock of these bees as a mine of wealth to its possessor, an idea which was but poorly realised in his

own experience. His book, like Nutt's, must be taken with salt. He wrote like an enthusiast, as he doubtless was. But there is really no need to exaggerate the good qualities of the Italian race; they are quite sufficient to win golden opinions, without adding anything fictitious.

The Ligurian bee, *Apis ligustica*, is rather smaller than our native bee, as it is both shorter and more slender. In shape it is more wasp-like, contracted in the waist, and with the abdomen tapering to a point.* The colour in the young bee is much lighter than that of *A. mellifica*, though certainly not "a light chrome yellow." On the anterior part of the abdomen there are two bright orange rings, separated by a black band, and the clear definition of these rings is a chief test of purity. Sometimes there is one broad band of orange undivided by the black line, while in other cases the first ring of orange will be clear, and the second imperfect; but the marking should be unmistakeable. They are exceedingly handsome and graceful insects, and no one can keep them without finding in their beauty a fresh source of pleasure. Fortunately they have other and still better qualities. They are more manageable, being but little disposed to sting, which in itself is no slight recommendation. They are more hardy, being a mountain insect, and venture out in colder and in duller weather, and commence working earlier in the season than their cousins. They are more active in their movements, and of a bolder disposition, entering the neighbouring hives with most dishonourable intentions, and with the easy assurance of continental manners. It has been said that they are furnished with a proboscis of unusual length, which enables them to work on the red clover, but this is a mistake, as there is no perceptible superiority in this respect. The crowning recommendation is that the queen is amazingly prolific, sometimes laying as many as 3,000 eggs in the twenty-four hours. One observer has seen her deposit six eggs in the space of a minute, and there is little doubt that were the hives in general use double their present size, she could occupy the whole space with brood. She begins to lay about ten days earlier than the black queen, which is a very much greater difference than it appears, as the increase is in a sort of arithmetical progression. As already stated, the great secret of success is to have a strong population ready to take advantage of the supply of honey when it comes, and every

* Mr. Neighbour was once showing his Ligurians to a friend, who said, "Dear me, these are bees, are they? Numbers of these pay us a visit, and thinking them to be wasps, we kill them whenever we can!"

week that can be gained in advance is a step towards the desired end.

Two or three examples of extraordinary increase must suffice. Mr. Woodbury records of one of his stocks, that in a single season it furnished *eight* artificial swarms, besides several brood-combs. Finding the hive once more full to overflowing, he put on a super, which gave thirty-eight pounds of beautiful honey, and when removed it became necessary to form a *ninth* swarm, the hive being insufficient for the population. A Ligurian queen which was sent to Scotland, and successfully placed at the head of a black stock, multiplied itself the following season into *seven*, giving three swarms, the first of which swarmed once, and the second twice, besides which the stock hive threw out thirteen dead queens, and the first swarm nine dead queens. These were some of the earliest importations, but the breed has not degenerated, as is shown by a swarm from an Italian stock in 1864, which weighed *eight pounds*. This swarm in about five weeks' time threw a swarm weighing five pounds, and again a second, though much smaller.

The American honey harvests last so much longer than our own, that it is only when a record is given of black and Ligurian stocks under the same conditions that we can form a fair judgment, but in almost every case the advantage lies with the latter. Thus a hybrid stock gave in 1863 three swarms and 100 lbs. of super honey, while not one stock of common bees in the same apiary gave a surplus at all. During the same season, nine pure stocks averaged 119 lbs. each. One of these stocks gave two swarms and 150 lbs. of honey, and one of the swarms gave 80 lbs. after filling the hive, making a total of *two swarms and 236 lbs. of honey*! The black bees in this apiary, kept in similar hives, and under precisely the same management, averaged 56 lbs., and one-fifth of a swarm! The comparative result is the same in England, though the disproportion between the two is not so great.

Although we have purposely avoided details of operations belonging strictly to bee management, many of them highly ingenious, yet it will be seen that bee-keeping is anything but the humdrum occupation which it is generally supposed to be. There is always something to see and to do, even when cottage hives are used. But the interest is of course much greater where any kind of observatory hive is employed, and where manipulation is frequent. To the interest of simple bee-keeping is added the still keener interest

of working out a series of scientific problems, every step of which is hazardous, and therefore renders success somewhat of a triumph. To ensure success, it is necessary to have a good store of knowledge which can only be gathered from books, and a still larger store of practical skill. The apriarian must have a cool head and a gentle hand, plenty of nerve, and of patience; he must be quick to decide, and as prompt to act, fertile in resources, and with a presence of mind that never fails. This is certainly a formidable list of qualifications, but it is no exaggeration to say that the lack of any one of them may imperil success. The numerous cases quoted may serve* as examples of the perfect control over the hive which the new system gives, and of the variety of treatment which it permits. There is abundant scope for ingenuity, and for the exercise of a sound judgment, as circumstances vary perpetually, and rules can rarely be made absolute, besides which there are many ways of attaining the same end. There are some occasions in which it is necessary to decide on the spur of the moment, and in which a mistake may be a serious matter, and there are other occasions which allow of leisurely decision. And in all cases, besides the broad distinction of doing the thing ill or well, there is the finer distinction of doing it neatly or clumsily. The man who can operate unprotected, and who is in the true sense of the term a bee-master, has an immense advantage in his unrestricted sight, which, besides being desirable at all times, is almost indispensable in searching for the queen. Still it is not given to everybody to conjure, and there have been many successful apriarians who could not go near their hives without both bee-dress and gloves. Such was the secretary of the earliest Apriarian Society in Devonshire, Isaac by name. A more noted apriarian than he laboured under a similar difficulty; so also does the sound authority and pleasant writer on apriarian matters, the "Country Curate," more recently and widely known as "B. and W.,"* and many others.

Some persons have an objection to bee-keeping on the score of cruelty. The objection is true where the bees, after

* Before it was known that the two signatures were identical, there was considerable curiosity to know who "B. and W." might be, and especially what the signature represented. For a long time this correspondent was spoken of as "the gentleman with the convivial initials (Brandy and Water);" then it transpired that he had been absent some time in Tasmania, and it was pleasantly construed into Back and Welcome. Finally it appeared that the initials stood for Bath and Wells, in which diocese he had obtained preferment. Long may he flourish, whether there or elsewhere, and rejoice all good bee-keepers by a more frequent use of his pen.

working unceasingly for their owner, are ungratefully destroyed in order to appropriate their store. But it does not hold with regard to the more rational mode of proceeding which has obtained of late years, and which has been distinctively called the "humane system." The honey which is taken is surplus honey only, which is often stored up in quantities beyond all possibility of using by the bees themselves; and which gathering is the result of an instinct implanted within them, evidently for man's benefit. By this system the hive-proper remains untouched, and it is certain to be well stored where super-honey exists. And if in some cases it is found necessary to "take" a hive, the bees are not smothered, but are driven out and joined to another stock. Bee-murder is always detestable, but it is also bad economy and a blunder. Condemned bees are in great request in the autumn for strengthening the population of other hives. When they cannot be procured, two weak stocks are joined together, and generally turn out well. "Enough for one is enough for two," is a saying highly popular among young people who have not yet cut their wisdom teeth. But it is a fact in bee-keeping, though a seeming paradox, that during the winter, what is enough for 10,000 is enough for 20,000, and that two weak stocks, which separately would barely survive, will unitedly do well, and moreover will consume only half as much food as they would have done separately. The explanation of which is, that the union of numbers will maintain a sufficient warmth and vitality, which heat must otherwise be maintained by food. It is in fact like the economy of the poor, a bed and a blanket instead of a fire. The consumption of food is from 2 to $2\frac{1}{2}$ lbs. during October, and about the same in November. In December, January, and February it varies from 1 to 2 lbs. In March it rises to 3 lbs., and in April, which is a critical time, it is much greater, though beginning to be aided by the new supplies. But no certain calculation can be given, as the consumption varies according to the mildness or severity of the season, and still more according to the strength or weakness of the stock. In a large apiary scarcely two hives are found to be alike, and the discrepancy is sometimes unaccountable. Thus out of twenty stocks, one consumed in the course of a month 44 oz. and another only 24 oz., while during the following month the quantity was 32 oz. in both cases, and of the remainder 43 oz. and 17 oz. were the maximum and minimum figures. The usual practice is to feed up at the end of September to 20 lbs. nett weight, so as to insure against all risks.

No one can have closely observed the habits of bees without being struck by their extraordinary sagacity, and their adroit management in circumstances where no fixed rule of proceeding could be supposed to exist. Whether two stocks, for instance, would repair the same accident in the same way, we cannot say, and there is room for experiments of this nature to almost any extent. But it is evident that in ordinary operations considerable latitude exists, and that no two hives are precisely alike. Two or three swarms hived at the same time, and working under precisely the same conditions, will not make the same proportion of drone and worker comb; and stocks preparing to swarm will provide, some scantily, and others liberally, in the matter of queen-cells. So, in swarming, there is a true discrimination and choice as regards locality. This was curiously illustrated in the case of a swarm at Blencowe, in Cumberland, which having been duly hived, remained quiet for about five hours, and then flew straight to an old tree, distant about a mile, which, however, was not hollow. After remaining a short time they took flight back again for the hive, and quietly settled there. Thus, having been placed in a dwelling which for some reason or other was not acceptable, they made trial of it for a few hours, and then resolved to make use of that selected by their own scouts; and this proving a change for the worse, they returned finally to the place appointed for them. "There is selection, comparison, a decision, and a decision reversed." An example of another kind shows similar discrimination. In a hive of extra size, when cross-sticks were dispensed with, the bees always worked the combs down to the floor-board, to which they fastened them for the sake of support, causing much disaster on any attempt to feed from below, or to change the board. When cross sticks were inserted, which furnished the necessary support, they no longer carried the combs to the bottom, but left them short in the ordinary way. Again, in the common hive, passages are left through the middle of the combs, for ready access to and fro; but in the frame-hives, which allow a free passage outside of the comb, such gaps are unnecessary, and consequently are never left; but each frame is completely filled up. Similarly, a comb having been transferred from a hive to a glass-box, which is too narrow to allow of a passage between it and the glass, the bees proceed at once to cut down the cells low enough to allow of free access to every part. The work is done with the most perfect accuracy, the cut edges being left as smooth and regular as when first built, so that the comb betrays no sign of having

been interfered with when viewed from the side. When again placed in an ordinary frame-hive, the cells are restored to their original depth. One of the old apiarians, Mr. Walond, relates that a heavy comb in one of his hives had broken away and fallen against the adjoining comb, so as to close the passage between them. At the end of a week two horizontal pillars were constructed between these combs, and a passage cut through the upper portion. In ten days more the broken comb had been securely fastened along its upper edge, and the little beams were removed, being of no further use. The buttressing and tunnelling are not particularly wonderful, or at least not more so than many other operations more or less common. The master-stroke of that instinct, which so strangely trembles on the verge of reason, is the removal of the pillars when their work was done. So, also, after a wall of propolis has been built up, when the danger is past, the defence is taken down.

Among examples of prevision and precaution, which must be considered a step in advance of the mere adaptation to existing, even if peculiar, circumstances, a Scottish apiarian relates that one of his hives was found in the spring to have cut down the empty honey-combs, which are generally deeper than brood combs, to the proper depth for breeding in, and this some time before the queen had begun to lay. Another mentions a hive having at its head an old and very inferior queen, who still continued to lay eggs occasionally, though so weak as frequently to fall from the combs, and required to be replaced. As her infirmities increased, her subjects treated her with but little attention, and an examination of the hive revealed the existence of three royal cells, one of them sealed over, so that the bees were clearly making their arrangements in anticipation of her death.

Among examples of instinct of a general character, in which all share alike, is the fact that in a poor honey season breeding ceases early, and the drones are at once killed off. In 1862 few hives contained any brood after the beginning of August; and in 1865, when the season was good, but soon over, many hives ceased to mature brood after the beginning of July. At such times if the queen continues laying, as she is often compelled to do, the workers will devour the eggs as fast as they are laid, rather than increase the number of mouths to be fed from a limited store; they will even tear the nymphs out of the cells in such seasons, and also in the spring if they are then stinted in their food. On the other

hand, by artificial feeding, in a bad summer, the brood will be reared, and even the drones be spared for some time longer.*

Bees must be credited with what is equivalent to language, and also with memory. The former is shown in the rapidity with which a colony of 30,000 or 40,000 is informed of the loss of their queen. Ordinarily her presence is ascertained by the continual contact of the antennæ of the workers with her person; but although this can only be accomplished by the workers in her particular neighbourhood, yet her presence is known throughout the hive. If the queen be removed, her loss is known sometimes in a few minutes, sometimes not for several hours, it being apparently taken for granted by all alike that she is in some other part of the hive. But when missed, the intelligence spreads far too rapidly to allow of communication to such a multitude by mutual contact.† So, too, the discovery of honey in any quantity is communicated rapidly, and the locality is thronged. A queenless hive is soon discovered, and the news is carried to the neighbouring hives, who pour out *en masse* in order to plunder it.

As regards memory, many anecdotes are related. Honey having been given from a window at the close of a late autumn, the bees crowded to the place the first fine day in spring, in the hope of finding a fresh supply. And Mr. Kirby relates that a swarm of bees once took possession of the roof of a gentleman's house, from which, after a few hours, they were dislodged, and properly hived. But for eight years in succession the descendants of that hive reconnoitred the same spot at swarming time; and would doubtless have settled there if allowed. As a place in which bees have once made their comb is a general attraction ever after, it might be supposed that the scouts observed about the old spot were

* During the three bad summers of 1860, 1861, and 1862, when engaged in the rapid increase of Ligurian stocks, Mr. Woodbury administered to his bees upwards of a ton of syrup.

† "Perceiving a hive in the act of swarming, I, on two occasions, contracted the entrance, to secure the queen when she should make her appearance. In each case, at least one-third of the bees came out before she joined them. As soon as the swarm ceased searching for her, and were returning to the parent-hive, being placed, with her wings clipped, on a limb of a small evergreen tree, she crawled to the very top of the limb, as if for the express purpose of making herself as conspicuous as possible. The few bees which first noticed her, instead of alighting, darted rapidly to their companions; in a few seconds the whole colony was apprised of her presence, and, flying in a dense cloud, began quietly to cluster around her. Bees when on the wing intercommunicate with such surprising rapidity, that telegraphic signals are scarcely more instantaneous."—*Langstroth*, p. 117.

from other hives, and that there was nothing very extraordinary in the proceeding. But it is expressly stated that the bees were watched, and on their return were seen to enter the hive in question, and no other; and as placing the fact beyond a doubt, they were dusted with yellow ochre, while on the roof of the house, the better to identify them. The information is supposed to have been handed down in some mysterious way from generation to generation, four or perhaps five of which die out in the course of a year. Dr. Bevan relates a story even more extraordinary. He says that a colony which was attacked in 1804 by the death's-head moth, one of the worst of their many enemies, and which suffered greatly from its ravages for want of more timely defences, did in 1807, when the moth again became troublesome, raise its ramparts at the first alarm, and thus kept the foe at bay. As three years elapsed between the two visitations, it is considered as another case of transmitted intelligence. But the evidence is by no means satisfactory, as the early preparation in 1807 might be a simply natural precaution in presence of a dreaded enemy, and has no necessary connection with any previous event. These two stories are worth noting chiefly as showing the estimation in which the insect is held by those who have most closely studied its habits. For the explanation offered, which is the same in both cases, and quite independently of each other, would appear almost absurd on the part of authorities less distinguished. Indeed, at one time a powerful section of naturalists, following the lead of Reaumur, claimed for the bee the higher attribute of reason, just as a great living authority puts in a similar claim for the dog. There is something like a show of evidence in the latter case. The dog dreams when asleep, and therefore thinks when awake. He balances probabilities within that brain of his; makes a choice between two objects, frequently acts counter to his natural instincts; and can be educated to an almost indefinite extent (his tasks are not learned imitatively like those of the monkey, or mechanically like those of the parrot or even the horse, but are understood and intelligently entered into). He exhibits the most lively emotions of hope, fear, love, joy, and sorrow, and sometimes of a sensibility still more refined. When a certain lover of the canine race was weeping bitterly under the pressure of heavy sorrow, his dog, who had never seen tears before, roused up from his slumber, reared himself against his master's breast, looked into his face with mute pity, and then gently licked his hand as the

only way possible of expressing sympathy. This, and a hundred similar proofs of delicate feeling, must be taken as the highest expression of brute intelligence. For the moment some gleam of a brighter light seems struggling with the darkness of unreason. But any fanciful theory of this sort is quickly dispelled by some ridiculous or grovelling act, which reveals the utter baseness of the brute nature.

In fixing the position of our little favourites in the scale of intelligence, we must not claim too much. They frequently modify their operations, but they never, like the dog, act counter to their instinct; they can be domesticated, and rendered to some slight extent docile and tractable, but they cannot be taught even in the minutest degree to transgress the imperative rules of their nature. Their communities are bound together by interest, not by affection, for they are pitiless to the ailing and decrepid. They are easily provoked, and are blind and indiscriminating in their rage. Wonderful as their operations are, instinct often plays them false. The faculty which enables them, from any point of the compass within the distance of a mile, to fly with a straightness which has become a proverb, to their own particular hive, nevertheless is baffled if the hive has been moved a single yard from its old position; and thus, though their vision extends for at least a mile, and probably two, they weary themselves in circling round the old spot, and will drop from exhaustion and die, unable to recognise so slight a change. So the instinct which can detect the failing powers of the queen, and provide a successor while she is still alive, will sometimes fail to recognise the sovereign whom they have themselves provided, and destroy her in the very moment when the loss is irreparable, and when her destruction involves their own. So also they have formed queen-cells on empty combs, have raised drones in royal cells, and they regularly carry in quantities of pollen long after it has ceased to be of use; when, in fact, the stock is queenless, and is consequently going fast to destruction.

So much of deduction may be made from extravagant claims. Enough, however, remains to excite our astonishment that creatures small even to insignificance, and whom we are accustomed to treat as of no account, should have so much in common with that intelligent group of animals who stand apart from the rest of creation as the friends and companions of man. Even of these, none have furnished him with so many worthy lessons—lessons of worldly prudence—of temperance in the midst of plenty; of industry amid surrounding

idleness; of perseverance under defeat and difficulty; of foresight and precaution; of the value of trifles; of that wise economy which wastes nothing, and turns everything to the best account; of living on the sunny side of the hill; of extracting luscious sweets, or if not, then fragrant balsams from the bitterest herbs—lessons, too, of the higher life, another and opposite phase of those which were once taught from the lilies of the field and the fowls of the air, and which every changing season repeats for those who will reverently listen.

ART. V.—*Elements of Geology, or the Ancient Changes of the Earth and its Inhabitants, as illustrated by Geological Monuments.* By SIR CHARLES LYELL, BART., F.R.S. Sixth Edition. London: John Murray. 1865.

It is difficult to fix upon any period as marking the birth of geology. During the seventeenth century, numerous observers stumbled upon detached truths, and a few men strove from time to time to frame geological systems. But all such efforts were ludicrously premature; whilst even the truths discovered were so hidden beneath piles of erroneous rubbish, that their discoverers but imperfectly understood their true value. Thus in 1759, Arduino adopted the division of stratified rocks into primary and secondary. Odoardi, in 1761, recognised in the occasional unconformability of such rocks, proof of difference in their relative ages. Fortis, Testa, Cortesi, and Spallanzani, were all more or less familiar with the resemblance between fossiliferous rocks, and the deposits forming under the sea in their own day. Arduino, Guettard, Desmarest, and Faujas, saw the relations which ancient basalts bear to modern lavas, and understood the probability of their having had a similar origin. Even Strabo in the first century, like Hooker in the seventeenth, appreciated the power of earthquakes in permanently altering the relative levels of land and sea, whilst the latter philosopher, as well as his cotemporary, Lister, recognised the fact that many of the species of animals found in a fossil state had become extinct. But in spite of the brilliancy of many of those discoveries, and the possibility that some of the writers may have obtained half-prophetic glimpses of the future of geology, it had not become a science. It scarcely attained that rank during the violent controversies between the Plutonists and the Neptunists, the respective followers of Hutton and Werner. Hutton, labouring amongst the disturbed crystalline rocks of Scotland, concluded that fire had been a powerful agent in modifying the crust of the earth. Werner, devoting his life to the study of the rocks around Freiburg, and finding on every hand evidences of the tranquil action of water, concluded that it alone had been the chief instrument by which the rocks were formed. Both were partially right. If the two accomplished heads of the rival schools could have accompanied one another to their respective fields of labour, they

would have seen that the shield had both a golden and a silver side. But, unhappily, this conjunction never took place. The discussions between their respective pupils became personal and fierce ; orthodox theologians and heterodox encyclopedists threw themselves into the conflict, which they made more bitter than before. In the very throes of her birth, Geology became identified with contradictory conclusions and won a bad reputation amongst divines, which she has not entirely outlived. She was regarded as unworthy of their serious attention. But, as time rolled on, men's passions, which had been allowed so largely to share in the scientific contest, cooled down, and a younger race of unbiased students arose, who selected from each of the rival hypotheses whatever of truth it appeared to contain. The now indisputable axiom became accepted, that fire and water had been the two principal agents in giving to the surface of the earth its present structure and outline ;—the former through volcanic action, and the latter by vast denudations and deposition of sediments. These important and well-understood truths were now firmly established, on evidences that were as indisputable as those which sustain the Newtonian doctrine of gravitation, or Dalton's law of atomic proportions. But Werner, in addition to his other labours, made decided advances in the direction already indicated in the middle of the last century by Arduino and Lehman. He showed that the lower and older crystalline rocks, to which, like Lehman, he applied the term *Primary*,* differed in many important features from the newer and superior ones, which he also followed Lehman in designating *Secondary*. Towards the latter period of his life, Werner saw the necessity for a third group, intermediate between the other two, and which he termed *Transition* rocks. Though, as we have seen, it was Lehman who led the way in this work, it was, unquestionably, Werner who obtained general acceptance for the classification and names referred to ; and though the advance in our knowledge has made other subdivisions necessary, it has not interfered with the general arrangement recognised by Werner, and even his terms still form part of the ordinary phraseology of the geological world.

* The term *Primary* was variously employed by the older geologists. Some used it as applied by Werner to all the crystalline rocks, including granite, gneiss, and mica slate, all of which were supposed to have been found prior to the creation of organic life. By others the term indicated all the *stratified* rocks older than the old red sandstone, whether they contained fossils or not. The term *Transition* was afterwards applied to the primary *fossiliferous* strata, now called Silurian and Cambrian.

Though important progress was now made, the labours of another individual were wanting to constitute geology a science. This was the well-known "Father of English Geology," with whom the writer of these lines enjoyed a close association during many of his youthful days. Smith's studies were chiefly directed to the classification and geographical range of the secondary rocks. These he threw into a series of minor groups, most of which are still recognised, and also traced their geographical range through England in a map, the great features of which are so marvellously accurate that it alone would suffice to have given him an imperishable reputation. But it is with a higher generalisation that his name will always stand associated—viz. the discovery that each stratum could be identified by the peculiar characteristic fossils that it contained, a discovery of which it is impossible to exaggerate the importance. Though, in applying to the entire world what Smith had derived from a survey limited to England and Wales, some modifications of his theory have proved necessary; the principle which he enunciated has been the pole-star of all subsequent geologists in every part of the globe. Amongst other discoveries, Smith determined "that different strata contain generally different fossils, but that the same stratum over a very large extent of country contains generally the same fossils;—that strata may be discriminated and identified by their organic contents;—that in their relations to living forms some species are allied, others are analogous, and the remainder so discrepant as to bear hardly any mutual resemblance;—that the greatest number of fossils which nearly resemble living objects, belongs to the most recent of all the strata—viz. those above the Chalk;—that whilst the strata were successively deposited, many races of organic bodies became extinct, and others were created to supply their place, more and still more assimilated to the present productions of nature."* The views of William Smith soon obtained general acceptance, and, guided by their light, a race of young and ardent geologists, who have since won for themselves honourable fame, sprang into existence, and built upon the foundations which these great teachers had laid.

We have now reached the earlier years of the present century, when we find the young science identified with the following conclusions: that the crust of the globe consists of an assemblage of rocks some of which were of aqueous and others of

* Phillips's *Geology of the Yorkshire Coast*, First Edition, pp. 12, 13.

igneous origin;—that the aqueous rocks were arranged in superimposed strata, or layers, resulting from successive depositions of sediments in water;—that these strata had not been indiscriminately heaped together, but were arranged in a definite order, corresponding with the sequence of their origin in time;—that most of these strata contained fossil remains of plants and animals, each stratum or group of strata having its own peculiar types of organic life by which it could be more or less readily distinguished in any part of the world;—that the older rocks contained fossils differing widely from any organisms now living, and which, after existing through prolonged epochs, finally became extinct, being replaced by other and newer forms;—that numerous repetitions of such organic changes indicated a chronological succession of periods of vast duration;—that there had also been constant changes in the distribution of land and sea, many of the existing countries having been permanently under water at periods geologically recent; and that consequently most of the phenomena revealed by geology must have occurred prior to the historic period, since we know that no such extensive geographical changes have occurred during that period.

We thus find that early in the present century geologists had arrived at most of the cardinal truths which they still recognise as fundamental, and which no sane geologist now dreams of disputing. It might be thought, indeed, that the great work was accomplished at this early date; but this was not the case. The foundations alone were laid. The entire superstructure had to be reared. Even at this period of advance and progress men had not wholly freed themselves from the influence of the absurd cosmogonies prevalent in the days of Whiston and Burnett. But their reign was over. In 1807 the Geological Society of London was established, as Lyell reminds us, “to multiply and record observations, and patiently to await the result at some future period.” The new society correctly understood its great mission, and applied itself to the work before it, untrammelled, at least in intention, by any foregone conclusions, whether scientific or theological. It is easier to propose working in this spirit than to succeed in doing so; and the remark suggests one of the first great points on which the modern school of geologists found it necessary to abandon some of their early notions. We may premise that no charge has been more frequently brought against geologists than that of habitually placing themselves in a position of antagonism to the sacred Scriptures. This charge is applicable to some individuals, but not to the

majority of the leaders of the science; and in no branch of the study has the opposite spirit been more manifested than in the subject to which we are about to call our readers' attention.

When, in the middle of the last century, such men as Whiston, Burnett, and Woodward, became aware of the existence of sea-shells imbedded in rocks that are now dry land, and even on the tops of mountains, they at once referred all the phenomena which they observed to the Noachian deluge. The progress of discovery, revealing the regular order of the strata and the successive creations of organic life, of which they contained the evidence, soon made this open hypothesis untenable; consequently, it was abandoned by Hutton, Werner, Smith, and their contemporaries, almost without an exception.*

Being generally believers in the Scriptures, and recognising the fact of the Noachian deluge, the present race of geologists at one time deemed it probable that some physical evidences of that deluge would be found on the earth. Thus, when the late Dr. Buckland published, in 1823, his "Reliquiae Diluvianæ," a history of Kirkdale, and other fossiliferous caves, he unhesitatingly assigned all the phenomena, of which he was the historian, to the Mosaic deluge. He and his contemporaries applied the significant term "Diluvium" to the vast mass of clays, gravels, and sands, that are so widely spread over the surface of our own and other countries, because they regarded all these deposits as relics of the same great event. Cuvier recognised in these deposits "la preuve la plus sensible de l'inondation immense qui a été la dernière des catastrophes du globe."*

* The only exception that appears to be of the slightest importance is that of Messrs. Young and Bird, the authors of the "Geological Survey of the Yorkshire Coast," of which the first edition was published early in the present century. The work was written by Young, Mr. Bird being merely the artist who prepared the illustrative plates. Its only value lay in these plates, which gave the geologists of the south an opportunity of studying some of the more common fossils of that rich fossiliferous region. But anything more complete than the evidence the text displays of the writer's unfitness for scientific inquiry cannot be imagined. The "facts" which the author quotes are in nearly every instance precisely the opposite of what he declares them to be; whilst his inferences are as illogical as his "facts" are unreal. Thus, he affirmed that the strata had *not* "been deposited according to fixed laws, in respect of extent, succession, or relative position." "The organic remains are so much dispersed and intermixed, that the attempt to identify the several strata by their respective fossils must be confined within narrow limits. Of our fossil organised substances, some correspond with recent animals and vegetables, others have no recent analogues hitherto known; and these two classes are so intermixed that we cannot regard the latter as more ancient than the former!" The mere fact of a man venturing to write thus in 1828, the date of publication of his second edition, from which we quote, puts him at once out of court.

* *Discours sur les Révolutions de la Surface du Globe.*

Professor J. Phillips, writing in 1828, says, "Of many important facts which come under the consideration of geologists, the 'deluge' is perhaps the most remarkable; and it is established by such clear and positive arguments, that if one point of natural history may be considered as proved, the deluge must be admitted to have happened, because it has left full evidence in plain and characteristic effects upon the surface of the earth."^{*}

All these are strong expressions; but when they were written, facts appeared fully to warrant them. Nothing was then seen amongst the deposits in question but vast heaps of débris, apparently piled up in wild disorder, without arrangement, and without evidence of any one part being materially older than the rest. With such apparent indications of some mighty and recent cataclysm surrounding them on every hand, men naturally turned to the Noachian deluge for an explanation of their origin; and so far from being anxious needlessly to divorce the Scriptures from their favourite science, the opposite desire influenced them in a way that very seriously retarded the progress of the study. But when the so-called Diluvium became the subject of more careful study, it was found to contain beds belonging to very different ages, during which not only had the climate and physical geography of the earth undergone numerous changes, but changes equally great had been effected in the animals that dwelt upon its surface. The apparently confused heaps were found capable of being reduced to order; and when this was ascertained, it became obvious that instead of representing a few months or even years of time, long ages had elapsed during the period of their accumulation, in which, as we showed in a former number of this Review,† the climate had time to change from a semi-tropical condition to one like that of Greenland, and again to return to the temperate one which we now enjoy. Under the pressure of such irresistible testimony, Dr. Buckland was compelled to reject, not the fact of the Noachian deluge, but the conclusion that the geological phenomena, which he had supposed to attest its existence, had any connexion with it. Professor Phillips and all his fellow-labourers were impelled in the same direction; and of the scores of living practical geologists, who are also godly Christian men, we do not believe there remains one who has not felt it necessary, in like manner, to

* *Geology of Yorkshire Coast*, p. 16. First Edition.

† *London Quarterly Review*, No. XXVI. "Geology of the Drift."

dissociate the objects of his studies from the scriptural records.

Having thus endeavoured to relieve our veteran geologists from the unmerited charge of hostility to the sacred writings, a charge which is often credited even where it is not openly urged, we may now glance at some other lines of inquiry in which changes have been made in the earlier conclusions of geologists.

Beginning with some of the more general problems, the question of the thickness and density of the solid crust of the earth is the first that presents itself. It has long been known that the earth was not a ball of solid matter. Of course our actual knowledge of its nature does not extend beyond a very few miles from its surface; but geometers and mathematicians have weighed the globe, and they find that its mean weight is not much more than double that of the average of substances composing its surface. If the four thousand miles intervening between our feet and the centre of the globe consisted throughout of solid material, inasmuch as the internal parts would have to bear the weight of all the outer portions, the former would become so compressed by the burden as to render them immeasurably more dense and heavy than we know to be the case; such a state of things would make the mean weight of the globe many times greater than it is. It was, therefore, supposed that the earth was a hollow sphere, the interior being occupied by elastic vapours, or at least by matter in some more imponderable condition than that of the rocks on which we stand. It has also been found that there is an increase of actual heat as we descend into the interior of the earth, at the rate of about one degree for every sixty or seventy feet. Assuming that this ratio continues to be the same in depths which we cannot subject to the test of experiment, we can approximately estimate the point at which the intense heat would convert everything into a molten mass, which it has been inferred would be the case from six to ten miles below the surface. But recent researches have shown that the conditions of the superficial and deeper parts are *not* the same. It has been found that compression, by rendering all substances more dense, counteracts the fusing power of heat. Hence it has been proved that the pressure of the more superficial upon the deeper strata, would demand a very much higher temperature than was supposed necessary in order to fuse the rocks. Hence, also, we must go deeper into the bowels of the earth in order to reach the melting point, leaving behind us a much

thicker crust than anyone had hitherto recognised. Mr. Hopkins, of Cambridge, who has investigated this problem in a most able manner, thinks that the crust must be several hundreds of miles in thickness. This is a very different conclusion from that previously arrived at. This problem, however, belongs to the astronomer rather than to the geologist, since the latter only deals with the more superficial changes undergone by such parts of the earth's crust as are within his reach. Even hypothetically he does not attempt to extend his domain to great depths. The discoveries of Mr. Hopkins were not made by means of geological processes, but by the higher ones of mathematical reasoning. Consequently his conclusions affect none of the great problems of pure geology.

We begin to deal with these problems when we endeavour to estimate the probable thickness and extent of the *known* strata of the earth's crust, and all the multifarious questions which their study involves. We have already seen that the existence of three groups of rocks, the primary, transition, and secondary, was established at the beginning of this century. The labours of William Smith were chiefly devoted to the secondary series, and, partly owing to this circumstance, and partly to the comparative ease with which they were studied,* especially in England, their great outlines and geographical range were soon ascertained. But the case was otherwise with the base and summit of the huge pile. These constituted two unknown regions, of the extent and importance of which no geologist entertained a conception. Above the secondary series the early geologists were only acquainted with what they termed *alluviums*, an unclassified group of deposits to which they attached little or no importance. Those which we now recognise as the tertiary and post-tertiary strata, yield to no others in the interest which their study has excited. Equal in interest are the revelations which have resulted from the study of the base of the stratified pile. Masses of which the thickness requires to be estimated by tens of thousands of feet, the products of Nature's hands in ages whose remoteness baffles every attempt to realise their antiquity—they are to time what the nebulæ are to space. Though we add figure to figure in our endeavour to

* We marvel that Cuvier, in his "Elementary Discourse," speaks of these rocks as presenting the greatest difficulties of the geological problem. The study of their continuous and comparatively undisturbed ranges has proved mere child's play compared with that of the great slaty masses of older date. Cuvier found the relations of the local Tertiary masses surrounding his Parisian home, of easy solution; all beside appeared difficult by comparison. He scarcely lived long enough to know what were the real difficulties of the field geologist.

symbolise the distance of the one and the duration of the other, we try in vain to form a true idea of either. The geologist has the advantage over the astronomer. He can take these rocks into his hands and analyse their composition. He can study what were the living creatures of that remote age, down to some of the most microscopic details of their form and structure ; and though many links are, and perhaps ever will be, wanting to him when he attempts to re-construct the chain of ancient life, the links that he possesses are, so far as they go, perfect in their minutest atoms, and far more luminous in the story they tell than the brightest of the heavenly host ; even though the wondrous resources of the spectrum analysis give the latter its aid in revealing their hidden secrets.

Two men stand out from the crowd of those whose labours have so extended our knowledge of these ancient rocks ; Sir Roderick Murchison, whom, whilst we write, our Queen has so worthily honoured by enrolling him in the baronetage of England, and Professor Sedgwick, that manly veteran, to whom the adornments of stars and ribbons could add no lustre. The latter long devoted himself to the study of his native Cumbrian mountains, where the primary rocks are developed on a gigantic scale. At the same time, Sir Roderick Murchison investigated the so-called Transition rocks in the border region between England and Wales. In one respect the latter had the easier task ; since he was working in a district abounding in richly fossiliferous rocks, serving as milestones wherewith to measure his progress, and indicate successive points of departure, whereas the former had to deal with convulsed and shattered mountain masses in which few or no trustworthy landmarks could be found. Murchison succeeded in proving that the obscure transition beds to which he now applied the name *Silurian*, because the countries in which he studied them had once been the home of the ancient tribe of the Silures, were just as capable of classification as the secondary strata. He showed that they exhibited the same orderly arrangement of rocks, of which each had its own characteristic types of fossils, indicating a long lapse of ages, during which successive races of animals had been created, lived, and disappeared from the face of the earth—as Smith had already shown to be the case amongst the chalks and oolites—facts of which the Huttons and Werners of an earlier date had little suspicion. During these investigations, followed up as they were by the able geologists employed on the Ordnance Survey, large mountain masses in the Snowdonian region of Wales, in Cumberland, and in Scotland,

were put into their proper places. It had been supposed that these Snowdonian rocks belonged to what was long termed the *Azoic* age, because no traces of life had hitherto been discovered in them; but the discovery here and there of fossiliferous bands, in the otherwise barren wilderness, showed that the rocks were of Silurian age.

We are far from having exhausted the roll of modern discovery amongst these more ancient rocks. Below the Silurian beds we have a mighty pile of strata which Professor Sedgwick has designated the Cambrian series, whilst these in their turn rest upon a still mightier group, of which the true extent has hitherto been imperfectly ascertained. To learn what has been accomplished amongst these latter strata, we must study the proceedings of the American and Canadian geologists, in whose districts these strata have received a development unknown in England. These ancient Huronian and Laurentian rocks, as they are now termed, exhibit a pile of more or less crystalline strata deposited from water, and which even now, in their consolidated state, are not less than 30,000 feet in thickness. Until very recently, no trace of organised structures had been found in any member of this ancient series, either in the Old World or the New. No wonder, therefore, that geologists had learnt to regard them as the products of ancient oceans, whose waters had never been rippled by the movement of any living thing; and were we to rely upon negative evidence alone, we too should have believed, with the earlier geologists, that these most ancient of rocks belonged to an azoic or lifeless age, being the products of physical forces operating prior to the first creation of life upon our globe. But we must be cautious, as Sir Charles Lyell has never ceased to impress upon the scientific world, before we arrive at so important a conclusion. Already the researches of our transatlantic friends have justified this caution. From amongst the lowest depths of the Laurentian slates they have exhumed what appear to be fossil remains—to which we shall shortly have to make further reference.

Parallel in their general bearings with the above are the investigations that have been made amongst the strata overlying the secondary beds—investigations in which Cuvier and Alexandre Brongniart led the way, but which have been followed up by those of a host of workers in every quarter of the globe. It fortunately happened that immediately around Paris, where these philosophers resided, there exists a remarkable series of Tertiary strata, in which the fossils proved that marine and fresh-water deposits had been successively

deposited. This discovery afforded a clue to the study of other similar strata. But it was only when the Tertiary strata had been classified by Sir Charles Lyell that the study assumed a definite character: up to this time the deposits in question had been regarded as patches, owing their existence to local causes; and because of this local origin, not to be arranged in any chronological order. But Sir Charles Lyell found the clue which in large measure unravelled the entangled skein. He showed that these hitherto neglected strata were capable of a comparatively exact chronological classification, based upon the relative numbers of the living and the extinct species of fossil shells which they contained. He proved that, so far from being unimportant elements of the stratified pile, they represented immeasurable periods of time, during which most of Europe, as well as of other parts of the present world, had been submerged beneath the sea—periods when the Alps, the Apennines, and the Himalayas were but the lowly beds of ancient oceans, from whose waves they have since risen slowly and majestically to form some of the noblest mountain ranges with which the world is adorned. These researches have still further shown that at the earliest part of the Tertiary age, very few of the plants or animals living on the earth were identical with those now in existence. Land and sea alike teemed with animal life; but, as Cuvier was the first to demonstrate amidst the gypsum quarries of Montmartre, the forms were those of strange and now extinct creatures. As observers ascended in the Tertiary series of rock, they found that the number of still living species gradually increased, until in some of the most recent of the Tertiary beds, as in the rich fossiliferous limestones of Palermo, nearly all the abounding fossil forms were identical with those still living in the waters of the surrounding ocean; showing that the only changes which had occurred, were those produced by a slow uplifting of the more elevated parts of the bed of the ocean into dry land, unaccompanied by any variation of climate, or of those physical conditions which led to the extinction of pre-existing forms of life. These discoveries made inevitable the conclusion that the history of the Tertiary deposits constituted a very significant chapter in the world's history; that they represented a succession of prolonged ages, during which race after race of organised beings had been created, accomplished their allotted mission, and then became extinct, to give place to others better adapted to a newer and altered state of the physical world.

But the significance of these discoveries does not stop here.

There rests upon the Tertiary strata a still newer series of deposits, which, in one sense, may be regarded as belonging to the existing conditions of things, but many of which are of vast antiquity. During this period many of the large rivers of Europe spread themselves out into wide, though possibly shallow, estuaries, and as their floods rolled seaward they deposited layers of sand and gravel along their extended beds. In time the streams cut through these gravels, excavating for themselves deeper but also narrower channels in which to flow towards the ocean. The gravels which had hitherto been their floors, were now become their restraining banks, contributing some share to a second series of gravels which the waters were strewing along their beds. Again were these channels deepened. The second series of gravels was cut through; the first being left high and dry, far above the reach of the most destructive floods. The diminished streams gradually reached their present deep but contracted channels, and their ancient beds, with their buttresses of sand and gravel, became overgrown with luxuriant vegetation. It is to the gravels thus formed that such a world-wide interest has recently been given, by the discovery in them of flint weapons of human workmanship, associated with the remains of animals which have long been extinct; discoveries which have raised critical questions respecting the antiquity of the human race. Upon the results of these new inquiries we do not venture to pronounce any definite opinion. They are still in progress, and much new light may be expected to be afforded by them ere we are many years older. But whether we agree with, or differ from, Sir Charles Lyell, Professor Huxley, and Sir John Lubbock, in their recently published opinions respecting the age of pre-historic man, we cannot deny that these investigations are as important as, during the last few years, they have been extended. Whatever may be the conclusions finally arrived at in reference to the primeval history of the human race, the deposits in which the earliest traces of man's work are entombed, have a significance and an interest which cause pyramids and catacombs to sink into comparative nothingness.

The preceding sketch prepares us for realising the enlargement which the ideas of geologists have undergone in late years, in reference to the actual thickness of the various strata forming part of the globe's crust. Some of the newer Tertiaries, which, as we have seen, were almost unknown fifty years ago, prove to have a vertical thickness of above 2,000 feet, whilst their oldest members, represented by the flysch beds of the

Alps, and the Nummulitic strata which range from Biarritz to the Himalayas, though their actual thickness has not been accurately measured, cannot be estimated at less than many thousands of feet. The thickness of the beds of Chalk and Oolite was pretty accurately estimated in the days of Smith. Below these we have the red marls and sandstones of the Vale of York and the broad Cheshire acres extending in some places to a depth of 2,000 feet. Then come the coal beds, with the limestones of Craven and Derbyshire upon which they rest, which were deemed to be liberally dealt with, a quarter of a century ago, when 5,000 or 6,000 feet were assigned to them, but which are now known to attain, in the South Wales coal-fields, to fully 12,000 feet. Below these we arrive at the Old Red Sandstone deposits, once supposed to be about 4,000 feet in extent, but which prove to have a vertical expansion of from 8,000 to 10,000 feet. Still descending, we reach the Slate systems, including the Silurian and Cambrian rocks. Professor Phillips, writing some thirty years ago, credited these with a thickness of 6,000 feet, whereas 30,000 feet proves to be nearer their true measure. Still lower we arrive at the base of the stratified pile; at those crystalline Laurentian and Huronian beds which are believed to reach, in America, fully 30,000 feet. If, at the beginning of the century, when the notions of geologists respecting the rock-masses to be accounted for, were so much more limited than now, they deemed myriads of years essential to their formation, what must now be thought necessary for the purpose, especially when we remember that they formerly exaggerated rather than the reverse, the velocity with which marine deposits are accumulated?

This observation leads us to another subject, in which a steady growth of opinion has led to some important changes in the views of geologists. When Hutton was labouring amongst the rocks of Scotland, he came to the conclusion that all the phenomena exhibited by the earth's crust were such as the existing forces of nature were fully capable of producing. But his views on this point were accepted by very few geologists. One of the first to admit their truth was Sir Charles Lyell, who, from the beginning of his career, sought to obtain their general recognition. During many years he stood alone. In the article on geology in the "Encyclopædia Metropolitana," the writer, referring to this question, places the dead Hutton and the living Lyell on the one hand, and the "general school of English geologists" on the other; the former maintaining "that the causes now in action, to change the level and alter

the relations of the masses of matter near the crust of our globe, are those which have ever been in action, identical in kind, and equal in degree, in all times past ;" the latter admitting that the ancient and existing agents are identical in kind, but contending that they now operate over "smaller areas, and with less effect." This modern school believed that in former times volcanic disturbances were more frequent as well as more violent than now, and that the sudden rush of torrents of water over vast geographical areas was no uncommon event. "The general school of English geologists" has found it necessary to substitute extension of time for greater violence of action, since they had little evidence that the latter had ever existed. We may illustrate the change that has taken place by again referring to the Diluvial deposit of Smith and Buckland. In a former number of this Review* we attempted to explain the nature and origin of these recent deposits under their modern name of the Drift or boulder formation, and, amongst other matters, we spoke of the huge masses of rock which had been detached from their native mountains, and strewed in profusion over countries occupying a lower level, hundreds of miles distant. As we have already seen, for a long time most geologists referred these phenomena to the Noachian deluge, but were at length compelled to abandon the theory. It was still longer before they freed themselves from the notion of violent cataclysms. When Professor Phillips saw the necessity for changing his views, which he did with philosophic caution, he said, "It may therefore very possibly be true that the turbulent waters of which we are now to trace the effects upon the surface of earth may be quite independent of the deluge of Scripture ; we have no right to *assume* any connection between them ; and, at all events, it will be prudent, before thus entangling ourselves in fetters which it may be difficult to unclasp, to wait for a full investigation of the subject."† Whilst thus making one important step in the right direction, we still find him identifying the drift with "turbulent waters ;" "disturbances of the most extensive kind ;" "temporary convulsions in the ancient system of nature ;" "watery tumults" and "violent waves ;" and he was not peculiar in employing these epithets ; Baron Cuvier, in like manner, spoke of the "inundation immense," and of the "catastrophes subites," whilst he connected the destruction of the Siberian

* *London Quarterly Review*, No. XXVI.

† *Enc. Met. Art. "Geology,"* p. 688.

mammoths, whose bodies were found imbedded in ice, with changes of climate as sudden as the deaths of the creatures. "C'est donc le même instant qui a fait périr les animaux, et qui a rendu glacial le pays qu'ils habitaient; cet événement a été subit, instantane, sans aucune gradation, et ce qui est si clairement démontré pour cette dernière catastrophe (viz., the Deluge) ne l'est guère moins pour celles qui l'ont précédée."*

Whilst the general stream of opinion flowed steadily in this direction, Lyell stood almost alone in resisting the current. We find him declaring in 1838, "it is inconceivable how any velocity of water could convey some of these huge masses over seas and valleys, to the places where they are now found;†" and all geologists now agree with him. The subject has received much of that "full investigation" for which Professor Phillips so properly recommended us to wait, and the result has been the development of that glacial theory which now meets with universal acceptance. What was wanted was the combination of gigantic force with the quiet action of tranquil waters, and such has been found in the action of icebergs. These majestic agents floated the huge rock-masses over a tranquil sea, and deposited them in its silent and almost motionless depths. Rushing cataclysms and watery tumults are no longer identified with the origin of the Drift deposits.

It was not only in reference to the Drifts that such expressions as we have quoted were constantly employed. As we have first seen, Cuvier extended the same idea to changes of climate and to the destruction of extinct races of animals. He carried out the notion to its fullest extent, as was shown, when he hesitated not to declare, in his nervous and graphic language, that, "le fil des operations est rompu, la marche de la nature est changée; et aucun des agents qu'elle emploie aujourd'hui, ne lui aurait suffi pour produire ses anciens ouvrages."‡

We will not say that all existing geologists have become absolute converts, on these points, to the school of Hutton and Lyell, but we hesitate not to affirm that most of them have; and that of those who still incline towards the old notions, there is not one who would now subscribe to the above extract from Cuvier's celebrated discourse. It has been no hasty generalisation which has led the modern geological school to its present views, but the irresistible force of evidence piled upon evidence; and it was only when further opposition to

* *Discours sur les Révolutions de la Surface du Globe.*

† *Elements of Geology.*

‡ *Discours, &c.*

that evidence became as futile as unphilosophical, that the change of opinion was effected. One result inevitably followed, viz., the necessity for a material extension of that already vast period which was deemed necessary to account for the present condition of our globe.

We may advance from these general statements to the consideration of some of the special questions which geologists have discussed during the last half-century. One of these has reference to the accumulation of the vast masses of carbonate of lime, appearing as marls, limestone and marbles amongst the rocks of almost every age. Of course this problem, like many others, may involve antecedent ones which appear to be incapable of solution. Whencesoever derived in the first instance, there is no doubt that the strata in question have obtained their lime from the waters of the ocean. How it first got there we know not; perhaps never shall know. The question which geologists have mainly to answer is, what were the agents that separated the mineral substance from its state of solution in the sea-water? The general conviction amongst the earlier geologists was, that, in the first instance, the lime was forced into the ocean through calcareous springs, and that it was subsequently precipitated by some chemical agency, as is now the case with the freshwater Tufas and Travertins of Italy and elsewhere. But even Cuvier saw that these modern Travertins were far too limited in extent to throw much light upon the origin of the more ancient limestones.

A nearer glimpse of the truth was obtained by Darwin and others, when they noticed the formation of calcareous mud in the tropical seas by the agency of marine animals. Boring shells, crustacea, some fishes and other coral-eating animals crushed the calcareous parts of the organisms on which they fed, and deposited them in the shape of fine calcareous mud.

Professor Phillips fairly represented the state of our knowledge some years ago, when he said, that "of all the strata yet discovered, limestone is exactly that which, by the regularity and continuity of its beds, by the extreme perfection of its organic contents, and by the absence of proofs of mechanical action, gives most completely the notion of a chemical precipitate." . . . "It may, therefore, be viewed as an oceanic deposit, resulting from the decomposition of sea-water, aided in many instances by the vital products of Zoophytic, echinodermatous, and molluscous animals."* These

* *Encyclopædia Metropolitana.*

explanations only embody a small portion of the truth which was more fully revealed when Ehrenberg discovered that chalk was mainly composed of microscopic Foraminiferous shells; which discovery was rendered still more significant by the further one, that similar Foraminiferous deposits are slowly accumulating at the bottom of the deepest parts of the ocean at the present day. Such facts led to further inquiries, which have rendered it more than probable that *all* the more extensive marine limestones have had a similar origin. These discoveries have also corrected an erroneous idea which prevailed thirty years ago—viz., “that the extreme gulphs of the sea are as devoid of organic life as the central solitudes of a sandy desert;” but, as we have recently shown in this Review,* it is in precisely such gulphs that organic calcareous beds are now accumulating in the company of flourishing colonies of star-fishes and other animals, and almost wholly free from admixture of inorganic materials, resulting from either chemical or mechanical physical causes.

The inquiry into the origin of our beds of coal presents points of similarity to that just dismissed. That coal was of vegetable origin has long been considered a settled fact; but how the vegetable masses found their way into the positions which the coal-seams now occupy, has been for many years a moot question. Hutton long ago suggested that they had been accumulated at the expense of a vegetation which grew on their present sites, and still later Deluc and Alexandre Brongniart contended for the same view. But for many years, geologists were inclined to favour the idea that the vegetable masses had been drifted into their present positions by currents of water. They were led astray on this point by attaching an exaggerated importance to the masses of drift-wood that are constantly being carried down by the Mississippi, and which often accumulate over wide areas in the Mexican Gulf. Brongniart had rested his opposing argument mainly on the occurrence of numerous upright stems of fossil-trees in a sandstone quarry at St. Etienne, near Lyons. Lyell, like most other English geologists, opposed the conclusions of the French savant; but even when doing so, we find him displaying some of his wonted caution, since he observes, in reference to the erect trees, “nevertheless, the possibility of so many of them having remained in an upright posture demands explanation, and there are analogous cases on record respecting similar fossils in Great Britain of a still

* *London Quarterly Review*, No. XLIII. “Life in the Deep Seas.”

more extraordinary character."* It was mainly the subsequent study of these analogous cases that led to what appears to be a final settlement of the question. Evidence, apparently irresistible, has been gradually accumulated, showing that a coal-seam represents a bed of vegetable soil, derived from a forest growing on the spot, which was often a marine tropical swamp, such as is now common amongst the Florida Keys. The notion formerly prevalent that the coal-deposits had been accumulated in *fresh-water* basins, seriously retarded our recognition of the truth, since it introduced awkward elements into the problem which rendered its solution needlessly difficult. This *fresh-water* notion was entertained on two grounds. First, because of certain fossil-shells (*Anthracosiae*) associated with the coal, erroneously supposed to be identical with the *fresh-water* family of *Unionidae*, common in our English ponds and rivers. Second, because of the numerous remains of *Entomostraca*, microscopic crustacea, resembling embryo shrimps enclosed in a mussel-shell, and which were then only known to be abundant in *fresh water*. Later researches have shown that these small animals are not only common in *marine* rocks, but that they swarm in our existing seas, so that the idea of the *fresh-water* origin of the majority of our coal-bearing strata is now abandoned. They have taken their places amongst the other marine sedimentary rocks.

We may turn from the contemplation of these reproductive operations of nature to some of an opposite kind ; glancing, in the first place, at the destructive agencies of water, and the influence they have exercised upon the physical geography of the globe. On these points modern geologists differ from their predecessors less than on many other topics—but there are changes of opinion to be chronicled. Professor Phillips, writing in 1827, said, "The excavation of valleys can be ascribed to no other cause than a great flood of water which overtopped the hills, from whose summits the waters descend As we have no proof of more than one such flood, and as there seems to be no contrary evidences, it is probably to the Deluge we must ascribe the excavation of valleys."† This is language that the distinguished Professor has long ceased to employ. No one is more familiar than himself with the evidences accumulated during a third of a century, telling of a more extensive and prolonged causation. It was well known at an early period, that considerable areas had been stripped of

* *Elements of Geology*, p. 447. 1838.

† *Illustrations of the Geology of Yorkshire*, First Edition, p. 22.

stratified masses which once covered them; but it was only when extended acquaintance with the several stratified rocks made us familiar with their normal extent and thickness, that we were in a position to realise how incredibly great had been the masses that have disappeared. As all the more modern sedimentary rocks of mechanical origin, such as shales, clays, sandstones, and the like, have been formed at the expense of pre-existing ones, it of course follows that the aggregate denudation has been equal to the mass of the sedimentary strata subsequently deposited. All modern accumulations of mud, sand, or gravel, are being conveyed by streams from the shivering slopes of some mountain, or from some wasting shore, upon which the sea is making slow but steady inroads. Theoretically, we are familiar enough with these operations, as the land-holders of Holderness have but too practical an acquaintance with a process that is gradually transferring their estates to the bottom of the sea. Nevertheless, when we hear of such examples as those to which Hugh Miller called attention, where masses of Old Red Sandstone, thousands of feet in thickness, have been removed from entire counties, examples that have been confirmed by what Dr. M'Culloch observed amongst similar rocks in the North-West of Ross-shire, as well as by Professor Ramsay, in the case of the Mendips, we are awed by the grandeur of the scale upon which Nature works. In all these instances, strata, averaging thousands of feet in thickness, have been swept away from areas many miles in extent, only leaving here and there detached mountains of horizontal strata, as railway excavators leave what they call "*buoys*" or pillars of sand and clay, whereby what they have removed may be duly measured. In explanation of these immense denudations, there has been a steady growth of public opinion in favour of the slow but prolonged action of existing agents, as opposed to the sudden rush of violent débâcles and unproven cataclysms. Atmospheric action, frosts, rains, glaciers, rivers, and oceanic currents, are all combining, at the present moment, in doing similar work, and most of them have been doing so since time began. It is to these agents we must look for the origin of many of our valleys and plains, as it is in their action that we find the explanation of the varying contours of our mountains. Why have we the acute *aiguilles* of the Pennine Alps? —the vertical cliffs of Craven and of Derbyshire—the slowly rising slopes, leading to sudden and rapid descents, common amongst the tabular hills of North-Eastern Yorkshire, or the undulating contours of the Yorkshire Chalk wolds, and of

the Sussex Downs? The explanation is to be found in the varying resistances to the destroying agencies we have enumerated, offered by peculiarities of structure and chemical composition, in these several rocks. Cuvier, as usual, only found proofs of violent elevation in the serrated peaks of the higher Alps; —“D'une grande distance l'œil aperçoit dans les dentelures dont leur crête est déchirée, dans les pics aigus qui la hérisse, des signes de la manière violente dont elles ont été élevées.”* He appears to have known little of the power of the agents to which we have referred, or of the varied resisting qualities possessed by different rocks. We owe our present knowledge of these subjects mainly to modern research.

These observations suggest another subject in regard to which geologists have gradually become increasingly sceptical, as to the suddenness and violence with which the effects about to be noticed were produced. If there is one point on which they entertain more definite opinions than another, it is in reference to the relative ages of the great mountain chains that belt the globe. When we examine minutely the structure of the chief of these mountain ridges, we commonly find that the highest peaks are composed of granite, or some other volcanic product, whilst the stratified rocks slope away from each flank of the chain, as the two sides of a double-pitched roof do from the roof-tree. These stratified rocks were primarily deposited under the sea in a horizontal position, and their present inclinations were given to them by the central volcanic force which raised the entire range from the depths of the ocean. As this elevating force was exerted along a line usually corresponding with the central crest of the mountain chain, it of course follows that the strata which were previously horizontal would be lifted up; and though they might retain their parallelism with one another, they would slope away to the right and left of the great line of elevation. Bearing in remembrance the chronological order of the stratified rocks, it follows that if we observe what strata have been belted by the elevating force, and what have been left comparatively undisturbed, we may ascertain the relative, though not the actual ages, of the various mountains; because it is obvious that all the strata covering the disturbed area prior to the elevation of the ridge, would assume an inclined position, whilst those subsequently deposited in the sea at the foot of the mountain, would assume the horizontal one natural

* *Discours Élémentaire, &c.*

to sedimentary layers. By applying the rules which this method of examination furnishes, we arrive at some interesting conclusions. We learn that the magnitude of mountain ranges has nothing to do with their respective ages. Some of the oldest mountains in the world are those of Scotland, Cumberland, Wales, and the Hebrides, whilst the Himalayas, the Andes, and the Alps, are, like the *nouveaux riches* of modern society, comparatively things of yesterday. Speaking definitely, whilst the former groups of mountains were uplifted prior to the period in which the coal-measures were deposited—if not in the interval between the Silurian and Devonian ages—the latter are the youngest of the huge buttresses of the earth, having been under the sea even during most of the Tertiary period. The problem to which we wish more particularly to refer is, the nature of the process to which the mountains owe their elevation. The earlier geologists believed in Titanic upheavals, by which the loftiest ranges were suddenly raised, whilst their mother ocean was thrown off from their reeking flanks, in violent and destructive torrents. The result of all modern inquiry points in an opposite direction. We can see that even now some parts of the globe are slowly rising above, whilst others are as slowly sinking below, their present levels. In the neighbourhood of the North Cape this elevation is progressing at the rate of about five feet in a century, but at the southern extremity of the Swedish territory it is slower, amounting only to a few inches in the same interval. The change of level here appears to be continuous; but in the case of the Andes the rise is paroxysmal. From time to time, the more violent of the earthquakes which shake the South American continent, upheave some portion of the land, especially on the western coasts. This is scarcely appreciated during the shock, but when its vibrations have subsided, the land is found to have been permanently elevated to the extent, sometimes of a few inches, sometimes of several feet; various water marks, discovered on the western slopes of the range, plainly show that what is now going on there, is but a continuance of what has been in operation ever since the eyries of the Condor ceased to be the retreats of marine creatures. These paroxysmal uplifts are very feeble affairs compared with what they were once supposed to have been, but we have no evidence that such phenomena were at any previous period materially different from what they are now—a truth recognised by most living geologists.

In order fully to realise what half a century has done for

geological science, we must glance at some other topics involving the study of special details. We will not dwell upon the fact that in that interval every part of Europe, from the crests of the Ural to Cape St. Vincent, has been explored, and there are few districts of any extent in that wide area of which the general features are not known. In like manner we pass over the similar explorations that are rapidly progressing both in the United States and in our own Eastern possessions. At the same time, it is only when we realise the incredible extent of these explorations, even in the most remote corners of the globe, as well as the number and intelligence of the gifted men who are carrying them on, that we can appreciate the breadth and solidity of the foundations upon which geological science rests. Europe, Asia, Africa, and America have contributed their several shares to the great store of geological facts, and the results of these contributions, brought from points so remote from each other, have been thoroughly confirmatory of the fundamental doctrines of geology. All the more important conclusions derived from the study of our own limited areas, such as the order of super-position, and relative antiquity of rocks, as well as the general aspect of the fossils which respectively characterise them, have been fully sustained by foreign explorations. So complete is this *general* accordance, that the names of groups of strata derived from British localities, such as Silurian, Devonian, &c., are accepted by geologists all over the world, and applied to beds of the same age thousands of miles away. We learn from this that, be they right or wrong, geologists have not attempted to build up an inverted pyramid, or to generalise from narrow and locally derived premises. The foundations they have laid are broad as the earth, consequently geologists are entitled to demand that the mighty super-structure which they have built should be criticised in a fair and respectful spirit by those who have contributed nothing to its erection.

The most remarkable of the departments of geology is that of palaeontology, or the study of the forms of ancient animal and vegetable life, which have been dug out of sedimentary strata of almost every age. Though men have long been familiar with the existence of fossils in solid rocks, the study was first put upon a scientific basis by Cuvier, when labouring amongst the gypsum quarries of Montmartre. Fossils had been collected and descriptive books written, but no fixed principles guided either collectors or authors. Cuvier showed that these Parisian quarries abounded in the remains of quadrupeds and extincts, which when living had been wholly distinct from any

now existing on the European continent. He not only proved these facts, but he also taught us to study the fossil forms by the light thrown upon them by living ones. Acting thus, he showed the world that the Palæotheria, and their associates in the beds of Montmartre, could only be compared with the wild Tapirs, whose herds now range the forests of South America.

The stimulus thus given to the study of palæontology was prompt and wide-spread. In a very few years the learned world was put in possession of facts sufficiently numerous to afford them some glimpses of the nature of the animal and vegetable life that had tenanted the earth during the successive stages of its history. At the same time, as might have been expected from the boundless extent of the subject, many blunders were made. These chiefly arose from the slowness with which geologists learnt one lesson, viz. how limited is the value of merely negative evidence. Because certain classes of plants and animals had not been discovered in the stratified rocks, men were too apt to conclude they had not existed when those rocks were formed. Experience has forced upon us a more correct estimate of evidence of this kind, and to this decided step we must trace some equally important changes that have been made in the conclusions of geologists. During the earlier years of the present century men flocked, hammer in hand, to such localities as were already known to yield a rich harvest of fossils, neglecting, for a time, those which were believed to be less productive. But such localities, however rich in certain forms and types, can scarcely give us a correct idea of the general life diffused over the globe at any one period. Let the reader visit the sea-shore when wintry storms have thrown up long lines of shells and seaweed. He can learn from the mass of refuse something of the plants and animals that live in that part of the ocean; but how little will he know of those which abound on the land and in the fresh waters of even the same vicinity. How long may he search before he discovers a bone of a horse, cow, or sheep? How rarely even will he find a trace of the sea-birds which are screaming overhead, or of the curlews and sand-pipers, whose shrill whistle startles him as he walks? Yet such heaps of shell and sea-wrack are doubtless the modern representatives of many a fossiliferous deposit—rich and varied it may be as a storehouse of the *marine* productions of the age and locality in which it originated, but only representing one very limited aspect of the life of the period. In time men abandoned such well-searched but classic regions as Bognor and Folkestone, Charmouth and the

Yorkshire coast. They broke up new ground, and in doing so they have from time to time stumbled upon spots where the fossils had been accumulated under different conditions, and where, in consequence, the life of each period was further illustrated by the discovery of new types. All this has resulted in great changes in the extent of our knowledge, especially in relation to the chronological range of several of the more important groups of plants and animals. Before illustrating these remarks, we must do justice to one man, who from his earliest youth has resisted the tendency to premature generalisation. We again allude to Sir Charles Lyell. The next subject to which we are about to refer affords an example of his cautious and philosophic mode of handling the great fundamental generalisations of geologists. After describing, in 1838, some apparent grounds for dividing all known strata into six groups, he says, "At the same time I may observe, that in the present state of the science, when we have not yet compared the evidence derivable from all classes of fossils, not even those most generally distributed, such as shells, corals, and fish, such generalisations are premature, and can only be regarded as conjectural schemes for the founding of large natural groups."* The wisdom of this caution has been shown by the results that another third of a century has brought about. The six groups to which Sir Charles Lyell has referred, were the Tertiary, Cretaceous, Oolite, Upper New Red Sandstone, Lower New Red Sandstone, and Carboniferous, and the Primary Fossiliferous. We will arrange these groups, with their leading subdivisions, side by side with those now recognised by geologists as approaching nearer to what actually exists in the crust of the globe:—

1838.

1. <i>Tertiary.</i>	
Newer Pliocene	· · · · ·
Older Pliocene	· · · · ·
Miocene	· · · · ·
Eocene	· · · · ·
2. <i>Cretaceous.</i>	
Chalk	· · · · ·
Greensand	· · · · ·

1865.

1. <i>Post Tertiary.</i>	
Recent.	
Post Pliocene.	
2. <i>Tertiary.</i>	
Newer Pliocene.	
Older Pliocene.	
(Upper Miocene.	
Middle Miocene.	
Lower Miocene.	
(Upper Eocene.	
Middle Eocene.	
Lower Eocene.	
3. <i>Cretaceous.</i>	
Upper Cretaceous.	
Lower Cretaceous or Neocomian.	

* *Elements of Geology*, p. 281. 1838.

	1838.		1865.
3. <i>Wealden</i>	}		
<i>Oolitic</i>	.		4. <i>Oolitic.</i>
Upper Oolite	.		Upper Oolite and Wealden.
Middle Oolite	.		Middle Oolite.
Lower Oolite	.		Lower Oolite.
Lias	.		Lias.
4. <i>Upper New Red Sandstone.</i>	.		5. <i>Trias.</i>
Keuper	.		Upper Trias.
Muschelkalk	.		Middle Trias.
Upper New Red Sandstone	.		Lower Trias.
5. <i>Lower New Red Sandstone & Carboniferous.</i>	.		6. <i>Permian.</i>
Magnesian Limestone	.		Magnesian Limestone.
Lower New Red Sandstone	.		Lower New Red Sandstone.
7. <i>Carboniferous.</i>	.		7. <i>Carboniferous.</i>
Carboniferous	.		{ Upper Carboniferous.
			{ Lower.
Old Red Sandstone	.		8. <i>Devonian.</i>
			{ Upper Devonian.
6. <i>Primary Fossiliferous</i>	.		{ Middle Devonian.
Upper and Lower Silurian	.		{ Lower Devonian.
			9. <i>Silurian.</i>
			Upper, Middle, and Lower Silurian.
			10. <i>Cambrian.</i>
Cambrian and other Fossiliferous Strata	.		{ Upper Cambrian.
			{ Lower Cambrian.
			11. <i>Laurentian.</i>
			Upper Laurentian.
			Lower Laurentian.

From the above tabulated statement, it will be seen that whilst extended observation has rendered necessary a much more detailed sub-division of the stratified pile than was formerly admitted, as well as the transfer of some of the strata from one great group to a neighbouring one, it has led to no change in the general super-position of the rocks, or in the estimate entertained of their relative antiquity, and still less has it shortened the ages deemed necessary for their formation. On the other hand, the effect has been to show that several of the great stratified groups, such, for example, as the Post Pliocene beds, formerly deemed unimportant, represent incalculable periods of time, during each of which, the earth had both peculiar physical conditions, and special forms of organic life. Here again the growth of opinion involves, not a reversal, but simply the extension of older views.

Closely associated with the above subject, is another in which advancing knowledge has led to more than extension. In the infancy of the science, when, as we have seen, vast sudden changes of every kind were believed in, it was supposed that at the close of each of the six great geological periods then recognised, every existing plant and animal had been extinguished, and replaced by new forms better adapted to the

changing physical condition which the earth was supposed to present. Thus it was believed that no one plant or animal belonging to the Carboniferous age had lived on into the Saliferous period—where again a fresh break had occurred, preparatory to the introduction of the new types characteristic of the Oolites. It was also supposed that each of these transition periods had been further marked by the occurrence of great physical convulsions, in which earth and sea were turned topsy-turvy and all the conditions of life revolutionised.

We have now learnt to disbelieve in these recurrences of worldwide uproars, alternately with periods of equally extensive tranquility—and along with this we have cast away our faith in the universal extinction of plants and animals which was supposed to accompany, if not to be caused by, the physical hubbub. Whilst there is no reason for believing that any one part of the globe was always free from volcanic and other disturbances, altering its levels, and modifying its physical outlines, we have strong reasons for disbelieving that there ever was a period in which all parts of the globe were being thus disturbed at one time. In the past as in the present, one region might be rising or falling, causing such changes as recently submerged hundreds of miles of the Runn of Catch, whilst other parts of the world enjoyed unbroken quiet. Catastrophes of this local kind would necessarily produce some changes amongst plants and animals; but most of them would, in all probability, be gradual. Old types would perish, because the conditions had become unfavourable to their existence, but the new ones, whencesoever and howsoever originated, would, in all probability, creep inconspicuously into being, and it would only be after the lapse of ages, that they would outnumber, and fill the places of their predecessors on the same ground.

We could readily cite many examples of this gradual transition from one geological age to another. It was long supposed that the boundary lines between the Tertiary and the Cretaceous strata was one of those most clearly and sharply defined; that not only its physical conditions, but its fossils, indicated an almost instantaneous transition from one state of things, to another wholly different; and if geologists had limited their researches to the basin of the Thames and the South-East of England, nothing could have appeared more true. The difference between the white calcareous chalk and the dark blue London clay resting immediately upon it, is as marked as is the bound from the Ammonites, the Belemnites, and the fishes of the former, to the Cerithia and the Volutae, the Cones and the Cowries, of the latter.

The first blow dealt to the accepted notions on these points came from America, where, instead of the marked transition from chalk to blue clay seen in England and France, the former was only represented by soft beds of calcareous marl, whilst the latter differed but little from the strata on which they reposited. A still more marked change came over the spirit of our dreams, on the discovery of the true nature of the Maestricht beds on the banks of the Meuse, and of the contemporaneous Faroe beds in some of the islands of the Baltic. In these strata we find Volutes, Cowries, Olives, Mitres and Cerithia, genera of shells always regarded as exclusively Tertiary, associated with Hamites, Baculites and Belemnites, genera deemed to be as exclusively pre-Tertiary. At the same time, we must not conclude that geologists were wrong in identifying these several genera of molluscs with two distinct geological ages. Their intermingling at the localities referred to merely shows that the Tertiary and Cretaceous periods had overlapped one another, instead of being severed by a well-defined physical and palaeontological boundary line. Descending to the next of these supposed breaks, we find at Speeton Cliff, on the Yorkshire coast, and the neighbouring Vale of Pickering, a *uniform* blue clay, the upper part of which indisputably represents the *Cretaceous* Gault of Folkestone, whilst the lower part as clearly belongs to the *Oolitic* Kimmeridge clay; showing that at the locality in question an undisturbed sea began to deposit layers of blue mud during the latter part of the *Oolitic* age, and continued to do so far into the *Cretaceous* one. The next great geological boundary occurs between the *Oolitic* and *Triassic* beds. Here again, localities have been found in which very dissimilar states of things have been bridged over. Such are the St. Cassian and Hallstadt beds on the northern flanks of the Austrian Alps. The true position of these richly fossiliferous strata has long been matter of debate, but it is now determined that they belong to the top of the Keuper, represented in England by the saliferous marls of Cheshire, and consequently constitute the connecting link between the *Triassic* beds below and the Lias forming the base of the *Oolites* above. When we turn to the St. Cassian fossils, we find a strange combination of *Oolitic*, *Triassic* and palaeozoic fossils. We have the well-known *Triassic* nautiloid shell, the Ceratites, and a number of other equally decided *Triassic* forms, intermingled on the one hand with such older palaeozoic types as Orthoceras, Goniatites, Euomphalus, and Megalodon; and on the other with forms hitherto undiscovered in rocks older than the *Oolites*,

Ammonites, Belemnites, Nerineæ, Trigoniæ, Ostreeæ, and Plicatulæ. We have here confirmed, but in a still more marked manner, the lesson we have already learnt in the higher strata; and the remarks which we have already applied to the Maestricht beds, are equally applicable here.

As might be expected from the great increase in the army of geologists, especially those who collect the fossils of their respective neighbourhoods, an immense addition has been made within the last few years to the number of known fossils, and with increase of numbers has come corresponding additions to the known types and classes. A comparison of the additions made to several of these classes of organisms, as recorded in "Woodward's Synoptical Table of British Organic Remains," published in 1830, and the numbers of the same classes enumerated in Morris' excellent Catalogue of British Fossils, which appeared in 1843, will illustrate this point. We have only selected a few groups, premising that amongst some other sections of the molluscous classes the increase is even greater than in those mentioned.

	WOODWARD, 1830.	MORRIS, 1843.
Mammalia	27	55
Reptiles	26	98
Fishes	29	480
Cephalopodous Mollusks	308	477
Echinodermata	74	309
Polypifera (Corals, &c.)	50	344
Plants	148	577

Since the publication of Morris' Catalogue, the additions have been made at as great, if not at a greater, rate than before. How rapidly this increase may advance in the hands of a few energetic men, is shown by what Sir Charles Lyell tells us respecting one of the most distinguished of the continental observers, "When M. Barrande, a French naturalist, undertook, single-handed, the survey of Bohemia, all the described species of fossils previously obtained from that country scarcely exceeded twenty in number. Whereas, he had already acquired, in 1850, no less than 1,100 species. . . . At a later period M. Barrande states that he had in his collection between 1,400 and 1,500 species from the same Silurian and primordial rocks of Bohemia."* It would have been marvellous if such additions as we have recorded had made no alterations in our views respecting the range of the various classes of organisms in the vertical scale of stratified rocks;

* *Elements of Geology*, p. 575.

which, of course, also represents the range of their existence in time. Here, again, we are indebted to Sir Charles Lyell for philosophic warnings, which it would be well if all men would impress upon their memories. He says, "In the annexed table a few dates are set before the reader, of the discovery of the different classes of animals in ancient rocks, to enable him to perceive at a glance how gradual has been our progress in tracing back the signs of vertebrata to formations of high antiquity. Such facts may be useful in warning us not to assume too hastily that the point which our retrospect may have reached at the present moment, can be regarded as fixing the date of the introduction of any one class of beings upon the earth.

" *Dates of the Discovery of different classes of Vertebrata, showing the general progress made in tracing them to rocks of higher antiquity.*

	FORMATIONS.	LOCALITIES.
Mammalia	1798 Upper Eocene	Paris (gypsum of Montmartre).
	1818 Lower Oolite	Stonesfield.
	1847 Upper Trias	Stuttgart.
	1782 Upper Eocene	Paris (gypsum of Montmartre).
Birds . .	1839 Lower Eocene	Isle of Sheppey (London Clay).
	1854 Lower Eocene	Woolwich Beds.
	1855 Meudon	Plastic Clay.
	1858 Upper Greensand	Cambridge.
Reptilia	1803 Upper Oolite	Solenhofen.
	1710 Permian (Zechstein)	Thuringia.
	1844 Carboniferous	Saarbruck, near Trèves.
	1709 Permian (Kupferschiefer)	Thuringia.
	1793 Carboniferous (Mountain Lime-stone)	Glasgow.
	1828 Devonian	Caithness.
	1840 Upper Ludlow	Ludlow.
	1859 Lower Ludlow	Leintwardine." *

This table becomes of great interest when we regard it in reference to the main object contemplated by this article, because it again demonstrates that the changes made in the conclusions of geologists are those of extension of horizon, and not such as have resulted from radical errors in the fundamental principles of their science. If we study the fossil mammalia referred to in the above list, we find, as we descend the scale, that each new example belongs, as theoretical geology would lead us to expect, to some new type. It is not the forms discovered by Cuvier at the close of the last century, in the gypsum quarries of Paris, that recur, in opposition to geological theory, in the more ancient Oolitic and Triassic beds. The older forms are thoroughly distinct from the

* *Elements of Geology*, pp. 582, 583.

newer ones. The Parisian types are tapir-like pachyderms; those from the Stonesfield slate are either opossum-like marsupials or insectivorous creatures, allied to the hedgehogs; whilst the newly-discovered Triassic *Microlestes antiquus*, though also apparently a marsupial, belongs, nevertheless, to quite a distinct genus from those of the Oolites. The birds, so far as they give a distinct utterance, tell the same tale. Some of the remains are so indistinct that it is not easy to say to what group of the feathered tribe they have belonged. But in other instances this is not the case. The example found at Meudon appears to have been a bird as large as an ostrich, but of an extinct type. The last discovery—viz., that of the *Archæopterix macrura*, found in the lithographic limestones of Solenhofen, differs still more widely from any living type. This fine specimen is so well preserved that even the feathers are impressed on the slab. It was about the size of a rook, but exhibited two peculiarities wholly unknown in any living bird. Instead of all the fingers of the anterior pair of limbs being employed, as in living birds, to support the wing-feathers, each wing was provided with two free claws, rudiments of which probably remain at the present day in the *spur* with which the wing of the spur-winged goose, the jacana, and some of the plover tribes is furnished. The most distinctive feature appears in the tail. In existing birds, even when the tail is as large as in the peacock, the whole weight of the feathers is sustained by the last one or two joints of the vertebral column; but in the *Archæopterix*, in which the long tail has contained twenty vertebrae, each of the bones supported a pair of feathers, arranged on the opposite sides, and inclined at an angle of about forty-five degrees to the axis of the body.

If we turn to the reptile world, we discover a repetition of the same story. The modern discoveries of reptiles in the Carboniferous rocks bring before us a group of large lizard-like salamanders, as well as some other big batrachians of the same class as the labyrinthodont reptiles, whose footsteps have been found so abundantly in the Triassic rocks; but the former are specifically distinct from the latter, and evidently belong to a different age.

There is no group of animals in which the peculiar forms characterising each geological age are more distinctive than that of fishes. On this subject geologists laboured for years in the dark. It is curious to notice how long the scientific study, even of English recent fishes, was neglected. It made singularly little progress between the days of Willoughby and

those of Fleming and Yarrell, whilst the foreign species were so little known, that the authorities of the British Museum had the greatest difficulty in finding a man competent to arrange their limited collection. Even whilst penning these lines we receive from the Amazon (whither the United States' Government has despatched an expedition under Professor Agassiz) news that singularly illustrate the present state of ichthyology. Under date of the eighth of September last, the Professor announces that though not one-third of the Amazon had been examined, and none of its affluents touched, he had obtained more than 300 species of fishes, of which more than two-thirds are new to science. The strange neglect which the scaly race long endured, was terminated on the appearance of the distinguished leader of the above expedition. Whilst an unknown youth, superintending an obscure museum in Switzerland, Agassiz grappled boldly with the study of both recent and fossil fishes; and one important result in our own country was, a rapid extension of our knowledge of the fossil forms met with in British strata. He supplied us with his celebrated classification of fishes into cycloid, etenoid, ganoid, and placoid, a classification which, in spite of its defects, did good service in its day; and he also laid the foundation of the study of genera and species. In all these labours there was very much of serious imperfection. Many of his decisions were arrived at hastily, when making flying expeditions amongst the museums of Europe, and when he trusted too confidently to his memory for details which could not well be thus retained. Hence there are few of his generic groups that have not required careful revision at the hands of observers more favourably circumstanced. Nevertheless it is mainly to the researches of Agassiz, combined with the efforts of Sir Philip Egerton, the Earl of Enniskillen, and the late Hugh Miller, that is due the large increase in the number of known British fossil fishes recorded in a previous page.* The existence of fossil fishes in some Thuringian copper-slates of the age of our Magnesian Limestone, was known at an early period; and in 1828, Professor Sedgwick and Sir Roderick Murchison brought to light a rich storehouse of similar remains in the still older Devonian slates of Caithness. Though remains of fishes were found in some Carboniferous rocks at Glasgow, as early as 1793, little or nothing was known of the

* Even now there is a sad want of labourers in this most promising field. In this country the death of Hugh Miller left Sir Philip Egerton almost alone in the study of ichthyal paleontology. Professor Huxley and Mr. Young have more recently contributed their help.

singular forms abounding in the true Coal-measures until the discovery of the Scotch Burdiehouse limestone, and the publication of Dr. Hibbert's important memoir upon those beds, some thirty years ago. Very shortly after this date similar remains were found in the Coal-measures in the neighbourhood of Manchester and Leeds, both of which fields have proved rich storehouses of these ichthylolites. The Caithness discoveries of Sedgwick and Murchison were followed up by the still more brilliant ones of the late Hugh Miller, aided by such allies as Dr. Malcomson, Mr. Peach and the Rev. H. Mitchell. In all these remarkable investigations, which so rapidly extended our knowledge of fossil fishes, the same general conclusions were indicated as we have already noticed in the case of the birds and the mammals. The fishes of the Oolites differed from those of the Chalk and Tertiary beds. On reaching the Devonian or Old Red Sandstone strata, the remarkable forms revealed by Hugh Miller, such as the *Pterichthys* and the *Coccosteus*, are not only again distinct, but belong to a type that has left no representative in our present seas; and when we descend to the base of the Devonian series, we find the *Cephalaspis*, which has so remarkable a form, that its discoverers were long puzzled to determine whether they had caught a fish or a crustacean Trilobite. Of the still older fishes of the Silurian strata, we know too little to say much.

There yet remains one subject for consideration connected with the increase of our knowledge of fossil organisms, viz., the position of the boundary line between the oldest palæozoic and the azoic rocks; between the oldest strata in which the remains of plants or animals occur, and those which are, or have been supposed to be, devoid of such remains. That the views of geologists on this point should long be vague and unsatisfactory was inevitable, whilst our general knowledge of the older strata was so defective. We were in comparative ignorance of the real age of some of our principal mountain masses. Thus many of the Cornish metalliferous slates, with their peculiar fossils, were, some twenty years ago, supposed to belong to the same geological age as the slates of Snowdon and Skiddaw; but we now know that the former are Devonian, whilst the latter are much older. Then again the Snowdonian rocks were believed to belong to the Cambrian period, whilst they are now known to be Silurian strata. The determination of such points as these was essential before we could decide which were really the oldest rocks, or which of them formed the base of the fossiliferous series. But we are now rapidly acquiring the

desired information. Nevertheless, we are yet as far as ever from determining the lowest point in the strata to which organisms descend. Each year pushes the line somewhat lower than before. Some new and fortunate discovery reveals fossils in rocks hitherto deemed azoic. Notwithstanding what had been done by Murchison and Sedgwick amongst the Silurian and Cambrian rocks, British geologists were long in the rear of continental and American explorers. Thus Barrande found in Bohemia a rich fossiliferous zone, abounding in remarkable crustacean Trilobites of the genera *Paradoxides*, *Conocephalus*, *Agnostus* and *Sao*; and M. Angelin recorded in his "Palaeontologic Suecica," the discovery of a similar series in Sweden. Corresponding deposits have been found in America amongst the head waters of the Mississippi, though containing somewhat different fossils. But continued research at last revealed the missing beds amongst the Welsh slates of Merionethshire, which are now known as the lower Lingula beds, owing to the fact that they abound in a species of Lingula (L. *Davisii*), a shell of the brachiopodous order, which was long supposed to be the most ancient of all known shells. Associated with the Lingula beds, are others containing the Bohemian and Swedish forms of Trilobites. This discovery was followed up by another, which once more gave our country the credit of possessing the oldest known fossiliferous stratum. A remarkable genus of fossils, called Oldhamia, and supposed to be zoophytic, was discovered along with some worm-tracks at Brayhead, in county Wicklow; but America has once more left us behind in this matter, though it is now by our own Canadian colonists that we are beaten. Some forty or fifty thousand feet below the Brayhead deposit, there has recently been found a remarkable fossil, the *Eozoon Canadense*, which appears to have been a gigantic species of foraminifer, a creature that belongs to the lowest group of animal structures. It is true that Professor King, of Galway, strenuously denies the organic nature of this *Eozoon*, which, on the other hand, is stoutly contended for by Dr. Carpenter, and other equally eminent geologists. If, as appears most probable, it be a true fossil, it not only stands in the van of all known life, but between it, and even the Oldhamiae of the Brayhead deposit, there extends a vast and apparently lifeless desert, occupied by the unmeasured masses of Laurentian and lower Cambrian rocks. But further research may show that we have as little reason for applying the word desert to these strata, as to the interior of Africa. As Spekes and Livingstones spring up in the geological world to explore the terra incognita below the Lingula

beds, they may find evidence of a primæval population as remarkable as that now known to inhabit the supposed deserts of Central Africa.

Though we have thus lost the credit of possessing on British ground the oldest fossiliferous strata, we have gained that of having the oldest of known shells. Within the last few weeks, Mr. Ezekiel Williams, of the Cwmheisean Mines, in North Wales, has discovered, near the site of the Tyd-dyngwladis Mine, another small brachiopod, which has pushed the Lingula into the second place, and to which the name of Obolella has been given. How long this stranger will retain its honours we know not, but we do not for a moment believe that the creation of molluscous forms began with it.

We have now glanced at some of the most important geological questions, in which the diligent research of an immense body of able men has led to important changes in the deductions at which they have been compelled to arrive. But we think we have shown that all these changes are merely in the direction of extension, and that they strengthen, instead of weakening, the claims of geology to our confidence.

We have purposely omitted all detailed discussion of the latest geological discoveries amongst the relics of pre-historic man, because we do not think that the time has arrived for definite conclusions on so grave a topic.

ART. VI.—1. *Eugénie de Guérin. Journal et Fragments, publiés avec l'assentiment de sa Famille.* Par G. S. TREBUTIEN, Conservateur-adjoint de la Bibliothèque de Caen. Ouvrage couronné par l'Académie Française. 16^{ème} Edition. Paris. 1865.

2. *Journal of Eugénie de Guérin.* Edited by G. S. TREBUTIEN. London. 1865.

3. *Lettres d'Eugénie de Guérin, publiées avec l'assentiment de sa Famille.* Par G. S. TREBUTIEN, Conservateur-adjoint de la Bibliothèque de Caen. Paris. 1865.

4. *Maurice de Guérin. Journal, Lettres, et Poèmes publiés avec l'assentiment de sa Famille.* Par G. S. TREBUTIEN. Et précédée d'une étude biographique et littéraire par M. SAINTE-BEUVE, de l'Académie Française. 8^{ème} Edition. Paris. 1865.

"My name shall never be mentioned in the world of letters," wrote Eugénie de Guérin, not many years before her death; yet few are the names which critic lips have sounded with such harmony of praise during the last three years. Strange that while the literary race of modern times is crowded with runners straining and agonizing for fame, the crown should so naturally have been placed on the lifeless brow of a woman who had made no effort to win it; who died, having neither published anything, nor indeed written anything for publication.

In 1855, seven years after the close of a career that seemed destined to leave but the ordinary transient furrow upon the sea of life—portions of the private journal of Eugénie de Guérin were printed by an admiring friend. These portions were but fragmentary it is true, and printed for private circulation; but the enthusiasm which they excited among all who were fortunate enough to obtain copies was so general that M. Trébutien was encouraged to undertake the publication of the whole. The book appeared towards the latter end of 1862; and from that moment success was assured. The obscure woman who had spent her days in quiet, homely duties, ministering to the comfort of those around her, became a name in French literature. Critics of the most opposite schools conspired to do her homage; M. Sainte-Beuve, the pure critic, for whom beauty of workmanship is

everything; M. de Pontmartin, the Legitimist and fashionable writer; M. Scherer, the most earnest of sceptics; M. Emile Montégut, whose articles occupy a prominent place even in such a periodical as the *Revue des Deux Mondes*; M. de Lamartine, the reading of whose earlier poems had itself formed an epoch in Eugénie de Guérin's life; and the venerable M. Villemain, most Attic of French Academicians. Nor did France alone do homage to the dead. Mr. Matthew Arnold likewise deposited a wreath of *immortelles* (we use the image and expression in deference to his French taste) upon her grave. His article in the *Cornhill Magazine* will be in the recollection of many of our readers. And, finally, the *Edinburgh Review* contributed its quota of praise to the general fund.

This concurrence of approval—and we have by no means furnished a complete list of the applauding voices—is a phenomenon that may readily be explained. There was in Eugénie de Guérin's mind a combination of qualities calculated to attract people of very different schools. Her journal is a book in which both saint and worldling may find pleasure and profit. For the one, its deeply religious tone of thought and almost mystical fervour have a pervading attraction. For the other, its graceful felicity of expression, pure style, and loving appreciation of the beauties of nature, possess a constant charm. Thus it has happened, that within three years and a half of its first publication, the *Journal* has gone through upwards of sixteen editions—a number which the volume of letters recently published will probably emulate. And now a translation of the *Journal* into English furnishes us with an opportunity, of which we readily avail ourselves, to say a few words on a theme that is so interesting. The translation itself is, as translations go, a very fair one. It does not indeed render all the grace and beauty of the original. That was, perhaps, scarcely to be expected. Whether it was possible, may be doubted. But the expressions chosen as equivalents for the French are frequently felicitous, and Mademoiselle de Guérin's meaning is always intelligently understood; merits which may fairly be taken as a set off against a good deal of imperfect English. The translation of our own extracts is based on this version; but inasmuch as we have taken the liberty of making alterations here and there, we alone are responsible for the accurate rendering of any of our quotations. To return, however, to our subject.

Eugénie de Guérin was born at the Château of Le Cayla,

near Alby, in the south of France, in the year 1805 ; and there she spent all but a very trifling portion of her life. The family to which she belonged was a very old one, as she informs us in one of the only passages of her writings indicating, and that very unobtrusively, any pride of race ; but in circumstances it was much reduced. Her father seems to have been something between a farmer and a country gentleman. She herself was almost as much in the kitchen as in the parlour. Her mother, of whose piety and Christian fortitude she several times makes mention, died when Eugénie, the eldest child, was only thirteen. There were three other children, of whom Maurice was the youngest ; and towards this frail Benjamin of the flock the eldest sister's heart went out with a glow of tenderness and loving pride that only deepened in intensity as the years went on. He was the one o'er-mastering passion of her life. For his eyes, and his only, she wrote her journal. For him she wept and prayed, when, seduced by the influence of La Mennais, the rebel priest, he forgot the faith she loved. For him she mourned with such sorrow as few hearts are deep enough to feel, when death cut short the promise of his young life.

And truly even for us, who look upon him with eyes unbiassed by a sister's partiality, there is much to admire in Maurice de Guérin. He was certainly not of such stuff as the heroes of this world are made of. His was not one of those natures formed to battle successfully with life, and weather the roughest usage of the world. The constitution of his mind, like that of his body, was frail and delicate. Melancholy, like a presentiment of his early death, brooded over his thoughts. The lesson of weariness which Byron, Goethe, and Chateaubriand had laboured so effectually to teach the nations over which their respective geniuses held sway, found only a too ready entrance into his mind. Nor was he a great or accurate thinker. Logical processes, as he often declared, were irksome to him. Reasoning was not his method of arriving at truth. The chain of solid argument that led him either to abandon his Christian beliefs, or to reconcile himself to the Church of Rome, was of the slenderest kind. But granting all this—the vacillating character and over-sensitive spirit—there was, as we have said, much to admire in Maurice. He was a poet, and a poet of a high order, with an exquisite feeling for the beauties of nature, and a power no less exquisite of translating both feelings and beauties into language. To him nature spoke “ authentic tidings of invisible things ” in a manner that it vouchsafes to very few ; and

even his sister's descriptions, graceful as they are, lack colour by the side of his.

Strong as was the bond of affection between them, it was only during a very short proportion of their lives that Eugénie and Maurice were destined to enjoy each other's society. At the age of twelve or thereabouts, he was sent to school at Toulouse, and from that time forth they met only at intervals, and intervals often very distant. From Toulouse he went to the *Collège Stanislas*, in Paris, where he remained some years. After leaving this place of learning he hesitated over his future course for a space, but finally determined to join a small religious confraternity, which La Mennais was founding at his house of La Chênaie, in Brittany, and to become a priest. This was towards the latter part of 1832, and the few months which he spent under the democratic abbé's roof, were the period of the great crisis in that extraordinary man's career. For La Mennais, it will be remembered, had just returned, after months of weary waiting in Rome, to find that his darling scheme of instituting an alliance between the Papacy and liberalism—a scheme on the success of which he thought that the salvation both of the Church and of the world depended—was utterly disavowed by the supreme pontiff. His newspaper, the *Avenir*, had been condemned, and Gregory XVI. had fulminated against the principles he held most dear one of those encyclical letters, that seem framed for the purpose of proving what nonsense it is possible for an infallible tribunal to enunciate. On this La Mennais, who had always been one of the most uncompromising asserters of that infallibility, submitted; but the yoke galled him sorely, and rebellion smouldered in his heart; so that before Maurice had been a year at La Chênaie, the little knot of disciples that had met there was dispersed by ecclesiastical authority, and the young man returned to the world with his faith in the Romish Church much shaken. After remaining in Brittany for a few weeks longer, he made his way back to Paris; tried to earn a living by writing for the newspapers, but soon conceived a strong dislike for that occupation; accepted an engagement as teacher at his old school, the *Collège Stanislas*; married a young Anglo-Indian lady, whom he loved tenderly, and whose fortune was sufficiently ample to keep him from want; was attacked by lingering disease, and finally was carried back to Le Cayla, where he died on the 19th of July, 1839. He was then only twenty-eight, and it seemed that for him, as afterwards for his sister Eugénie, fame had no niche in store. For like her

he was careless of literary distinction. His most graceful thoughts and beautiful descriptions had been sown broad-cast in a journal written certainly with no view to publication; in private letters; in ten or twelve fugitive pieces; and finally, in two prose poems, the *Centaure* and the *Bacchante*. Fortunately, however, his friends entertained strong convictions respecting the permanent value of these fragments. By their care some of the most noteworthy were placed in the hands of Madame George Sand, and that great literary artist at once recognised the productions as those of a congenial spirit. She wrote for the *Revue des Deux Mondes* (15th May, 1840) one of those graceful articles of which she possesses the secret so perfectly, expressing her admiration for the deceased poet. This article contained extracts from his letters, and the *Centaure* in extenso; but though these quotations, as M. Sainte-Beuve informs us, had produced a powerful impression on the younger literary spirits of the day, it was many years before a complete collection of Maurice's remains was published. Owing to delays, the more vexatious that they seem to have been caused by dishonesty and culpable carelessness, it was not till 1860, twenty-two years after his death, that his friends were able to claim for him that place in French literature to which he was entitled.

Such is a brief outline of Maurice's career. That of Eugénie was even less eventful. For while he went forth to take his part—a somewhat languid one, it is true—in the affairs of the busy world, she scarcely ever stirred from what she often called "the desert" of Le Cayla. Of her earlier years we know scarcely anything. Bright and pure as is the light which her journal and correspondence throw upon the deeper workings of her mind, and even upon certain portions of her outward life, yet, wherever these fail us, we are utterly in the dark. No biography has been published to fill up the gaps in her history; and one such very wide gap exists as regards all that she thought or did up to the age of twenty-six, the first of her letters which we possess being dated the 12th of July, 1831, and her journal not commencing till the 15th of November, 1834. From the former of these dates, however, we can, for some years at least, follow the even tenor of her way almost step by step. And a more placid, unbroken course, it is scarcely possible to imagine. For weeks no event of greater importance than the arrival of a letter would break in upon the little household at Le Cayla. Eugénie herself seems to fear that the record of such

monotony would prove uninteresting even to so loving a reader as Maurice :—

“ ‘ It occurs to me,’ she says in one of the earlier pages of her diary, ‘ it occurs to me that all this writing may only be loss of time, and that you will not find anything sufficiently attractive in these pages to induce you to open them all. What will they contain ? an account of days that are all alike, something of a life that leaves nothing to record. Better that I should return to my sewing.’ ”

Nothing to record ? Let the very next paragraph refute the assertion :—

“ How beautiful must be the heaven of heavens ! This is what I kept thinking during the moments I have just spent looking up into a glorious winter sky. It is my wont to open my window before going to bed to see what kind of weather it is, and if fine to enjoy it for a moment. This evening I looked longer than usual, so passing beautiful was the night. Were it not for the fear of cold I should be there still. I thought about God who has made our prison-house so radiant ; I thought about His saints who have all these beautiful stars beneath their feet ; I thought about you who were perhaps looking up at them. All this might easily have detained me all night. However, I must resign myself to shutting the windows upon this grand outer world and closing my own eyes beneath the curtains. Eran (her other brother) brought me two letters from Louise this evening. They are delightful, breathing the charm of wit, heart, and soul ; and all this for me ! I scarcely know why I am not quite carried away—intoxicated with friendship. And yet God knows that I love her deeply. There you have all my day to its very last hour ; there is nothing left but my evening prayer and the waiting for sleep. I don’t know whether it will come to me ; it is very far off at present. Possibly Mimi (her sister) will return to-morrow ; at this very hour I shall have her. She will be here, or rather our heads will be resting on the same pillow ; she talking to me of Gaillac, I to her of Le Cayla.”

In this paragraph, chosen at random, and forming indeed merely an average entry in the Journal, we have something like an epitome of the objects of Eugénie’s thoughts ; and as the poets of science have been able by the help of one bone to reconstruct an extinct creature, so by the help of even these few lines we might form a pretty accurate notion of the leading features of her mind. For in them we can trace her strong home affections, her passionate love for Maurice, the pleasure she found in one or two congenial friendships, her exquisite enjoyment of the beauties of nature, and the piety that led her every thought up to God.

And first as regards her home affections, it is really touching to see them so strongly developed in one who, though not

beautiful, was eminently qualified to shine in any society. Of this the few pages of memoranda written during her second sojourn in Paris, in 1841, are ample proof. But much as she might be admired by discerning strangers, much as she might be cherished by loving friends, much even as she herself might be "attracted by all elegance, good taste, refined and noble manners, and take delight in the earnest, brilliant conversation of men, in the graceful, pearly talk of women;*" . . . yet, wherever she was, her "heart untravelled," still returned to Le Cayla. It is very seldom that she leaves her quiet home even for a few days, and when she does, she seems almost unhappy, and out of her element. Though often, as we shall have occasion to see, sad and melancholy, she scarcely ever repines at her lot, or wishes that Providence had placed her in a different set of circumstances. She is pre-eminently contented. She loves her sister Marie, and her brother Erembert, less fervently indeed than she loves Maurice, but still very tenderly. For her father, who seems to have been a saddened, affectionate, deeply religious man, she entertains strong feelings of veneration and filial love. She even finds pleasure and comfort in those homely prosaic duties which so many women far less nobly endowed often affect to despise. And this is a point worth considering, for that Byronism which looked upon common sense and the common duties of life as all too small for the mighty grasp of genius, is not yet entirely a thing of the past, though regarded with much less favour than of yore. Referring to a letter, written apparently in a high poetic strain, which she had just received from one of her brother's friends, she says,† "The woman-poet, which he imagines me to be, is a purely ideal being, totally strange to the life I lead, a life of busy cares, and of house-keeping duties that swallow up my every moment." And by a kindly compensation these commonplace occupations sow in her mind the seeds of graceful thoughts. How many persons are there, for instance, to whom an afternoon's washing would suggest the following passage?

"Twilight—I write with a fresh hand, having just returned from washing my dress in the brook. It is pleasant to wash, to watch the fishes, ripples, blades of grass, leaves and scattered flowers pass by, and to follow them, and I know not what besides, run down with the current. So many things occur to the washer-woman who knows how to read the secrets of the brook. It is the bird's bathing-place, the mirror of the sky, an emblem of life, a moving pathway, the reservoir of baptism."

* Extract from the Memorandum just referred to.

† *Journal*, entry for the 3rd of January, 1835.

This is indeed to "see books in the running brooks." Again, let us listen to a few sewing thoughts: "For three days I have scarcely put down my needle. First we worked at a child's frock, a pretty little pink frock, which I stitched with gracious thoughts. There is something so sweet in childhood and its adornment! Such pretty little curling tresses will fall over that little body, an arm so white and round will fill the sleeve, such a pretty dimpled hand will peep out from it, and the child herself is so pretty, and is called Angela. It was a pleasure to work for her." The following is a picture, perhaps rather of her holiday evening than of her active culinary day, but we scarcely think that it was only in the evening that the kitchen fire spoke to her:—

"How pleasant it is when the rain is pattering without to sit at the chimney corner, tongs in hand, making sparks! This was my pastime just now. I am very fond of it; sparks are so pretty; they are the flowers of the chimney. Really there are exquisite things going on among the glowing embers, and when I am not busy I like to watch the hearth's phantasmagoria. Thousands of little ember shapes come, go, dilate, change, and disappear; now angels, horned demons, children, old women, butterflies, dogs, and sparrows: there is a little of everything. I remember one face, bearing an expression of holy suffering, that depicted to my mind a soul in purgatory. It struck me, and I should like to have had a painter by my side. Never was there a more perfect vision. Just watch the burning logs, and you will agree with me that there is much that is beautiful in them, and that unless we are blind we ought not to grow weary of sitting beside the fire. I pray you above all, to listen to the little whistling sound that sometimes issues from beneath the embers like a little singing voice. Nothing can be more pure and sweet. It is like the singing of some very tiny spirit of the fire. Such, my friend, are my evenings and their amusements; and you may add sleep, which is by no means the least attractive."

But, much as she loved her father and the brother and sister with whom her daily lot was cast, much too as she loved her home, the great love of her heart was unquestionably Maurice. Her devotion to him breathes in every page of her journal. It was, as we have already said, written for the pleasure it might afford him in his prolonged absence from home, and intended for his eyes only. There is an entry that shows that she studiously hid it even from her father's sight. And the reader who now takes up what was never intended to become a book, is occasionally startled by such utterances as the following: "This is not for the public; it comes from the inmost heart, it is intended for one alone."

Startled, we say, because he cannot but instantly think how the innate delicacy of her woman's nature would have shrunk from letting the rude world pry into the deepest recesses of her soul. And yet it is this perfect unconstraint, and consequent carelessness of effect, that constitutes one of the great charms of the Journal. The world is perhaps getting somewhat tired of the sensational in literature. Or if that be not the case, at any rate, there is in many quarters a growing taste for what is natural and unforced. And this, joined to their singular elegance and directness of style, may partly explain the success of Eugénie's writings. But to return to her love of Maurice, which finds expression under every variety of circumstance in the Journal. At one time "a little insect, no larger than the dot of an i, passes over her copy-book," and she wonders "whither it is going, how it lives, whether it has not some grief weighing on its heart, *whether it is not seeking some Paris where it has a brother?*" At another she speaks to him of the vanity of this world's pleasures, and tenderly longs that he would seek peace there where alone true peace is to be found. When his health begins to fail a tinge of deeper sadness comes over her thoughts. That this world is no abiding place of rest, was a conviction that had early impressed itself upon her mind. But from this time death becomes a more frequent theme with her, and gloom gathers thickly round her heart. This gloom, even the festivities of his marriage are unable to dispel. Amid its joyful preparations, and in its consummated happiness, her soul was only too truly prophetic of sorrow. Thoughts and dreams of death haunted her on her way from Le Cayla to Paris, to be present at the wedding. And on the day itself, in all the joy of seeing him so happy, her heart still obdurately refused to banish fear. "A horrible vision of coffins, hung with silver fringes, and placed on the long settees round the drawing-room," struck dismay into her breast. "I closed my eyes to shut it out," she says. But all to no purpose. The seeds of death were in Maurice's constitution, and her very love for him made her only too keenly alive to the fact. From Paris she did not return directly to Le Cayla. After remaining some weeks with the newly married couple, she went to visit a sick friend, Madame de Maistre, at Nevers. Here she stayed for three months, in ever increasing anxiety about the state of Maurice's health, for under the simply amazing treatment of his first medical adviser—a treatment that consisted in weakening one already brought very low by consumption—he was getting rapidly worse. Nor was her

anxiety lessened by the most mistaken kindness of those who, as is only too customary in such circumstances, hid the full state of the case from her, and wrote, "peace, peace," when her heart knew that there was no peace. Towards the latter end of June, however—the marriage had taken place on the 15th of the previous November, 1838—the sufferer longed to revisit his early home, and his physician (the second, probably), deeming that the change might do him good, sanctioned his leaving Paris. Eugénie started from Nevers at the same time, and met him at Tours; and thence the dying man was taken by slow, sad stages, to Le Cayla.

He died, and darkness overshadowed her life. "Henceforward," she cries, "my life will be one of mourning; my heart widowed." She still continues, however, to write her Journal; for she feels it to be a kind of link between herself and the dead, and in its pages she lets the full tide of her grief flow unrestrained, or restrained only so far as is the grief of those whose hopes reach behind the veil. Henceforward it becomes a kind of "In Memoriam"—and for pathos and beauty the entries are occasionally not unworthy even of such a title—in which we can follow her sorrow in all its moods. Here, for instance, is an entry suggested by one of the anniversaries that are "happy returns" while those we love are among us, but sad indeed when they are gone to their rest.

"4th August. On this day there came into the world a brother, whom I was to love deeply, and, alas! to mourn deeply, for these often go together. I have seen his coffin in the very room, and on the very spot, where I can remember as a child to have seen his cradle when they brought me back from Gaillac, where I was then staying, to be present at his baptism. That baptism was a gay and festive one, much more so than that of any of the rest of us. I enjoyed myself extremely, and went back the next day, feeling very fond of that little new-born infant. I was then five years old. Two years afterwards I returned, bringing him a little frock that I had made for him. I put it on him, and led him by the hand along the north warren, where he made a few steps alone. They were his first, and I ran joyfully to carry the news to my mother. 'Maurice! Maurice! has walked alone!' To-day the recollection comes to me all bedewed with tears."

At another time, in a sadder darker hour, "sad unto death" as she herself says, she longs to peer into the world beyond the grave. She yearns for some certain knowledge of Maurice's present state, and the horrible suspicion comes to her that his soul may perchance be lost for ever. The same thought recurs in a letter to one of her dearest and earliest friends, Mademoiselle Louise de Payne, where she says,

“Oh! if I were certain that he is in heaven, how peaceful and content I should be! But, Louise, terrible fears sometimes come over me when I think of that awful eternity. The most righteous tremble before God. Yet we must rely on His infinite mercy, and do all we can for the relief of those poor departed.” A Protestant would have been spared such feelings; but that is a point to which we shall have occasion to revert. Later on in the Journal there is a long entry that describes Maurice’s last moments, and shows how indelibly all their little circumstances were branded on her memory. At last she hears from one of her brother’s friends of the proposed article in the *Revue des Deux Mondes*, which George Sand was about to undertake at the instigation of M. Sainte-Beuve; and, as was natural, this recognition of his literary worth touches her deeply:—

“‘What can I say? What can I reply?’ she asks. ‘What is it that you announce to me as being in preparation for Maurice? Poor ray of fame which art destined to fall upon his grave! How I should have loved to see it fall upon his brow while he was yet alive, and when we could have beheld it without tears. It is now too late for our joy to be complete, and yet I experience a kind of strange pleasure at this funeral note of fame which will ring out the name I have most loved, and in repeating to myself that this beloved memory is not destined to die. Oh! the heart longs so to immortalise what it loves. I had heard this said, and now I feel it, and that the desire stretches from heaven to earth. Whether through love or faith, whether for this world or the next, the soul spurns annihilation. Maurice, my friend, still lives; he is gone, has disappeared from this lower sphere, but only as a star that sets in one place to rise in another. What comfort this thought is to me, and how it upholds me in our separation! How many hopes do I link to it! This ray which is about to break on Maurice’s name, I seem to see it coming down from heaven like a reflection of the glory-crown that shines on the forehead of the elect, of the spirits that are saved. The lost have nothing that distinguishes them before God, nothing that remains theirs whatever marks of distinction men may confer upon them, for all human fame soon passes away. I should not rejoice if I thought only of this last as belonging to my brother; but his death was a holy one, and I hail with intense delight the glorification of his intellect, which may thus be an earthly image of the canonisation of his soul.’

The pleasure which she here anticipated did not, however, come unalloyed—few pleasures do. George Sand’s notice, flattering as it was, grieved her deeply. For while acknowledging, and acknowledging gratefully, the praises lavished on her brother’s talents by so high an authority, yet she felt strongly that his religious sentiments had been placed in a

wrong light. The following is part of the entry in the Journal that describes her emotions on first reading the article in the *Revue des Deux Mondes* :—

“ ‘Blessed be those,’ she says, “ who value him at his worth ; blessed be the voice that praises him, that places his name so high, and with so much respect and intelligent enthusiasm ! But that voice is mistaken on one point, mistaken when it says that faith was wanting in that soul. No, he did not want faith. I proclaim, and bear witness to this, by what I have seen and heard, by prayers, devotional readings, by sacraments, by all the acts of a Christian, by death which unveils the secrets of a man’s life—a death upon the Cross. I have a great mind to write to George Sand, to send her something that I have in my heart respecting Maurice : something that would be like a crown to hide the spot which she has placed upon his brow. I cannot bear that the slightest feature in that countenance should be changed, a countenance so beautiful as it actually was ; and this irreligious and Pagan light disfigures it.’ ”

Yet, and we really are very sorry to say so, it seems to us that George Sand, judging simply as a critic judges, had reached a truth hidden from the eyes of Maurice’s sister. And we, grounding our opinion on the same evidence, can scarcely help arriving at the same conclusion. Maurice’s nature was not a religious one, and the works he has left behind—the *Centaure*, *Journal* and *Correspondence* breathe Pantheism, not Christianity. M. Sainte-Beuve seems to us quite right when he says, “ Maurice de Guérin, during the years when he wrote the pages that recommend him to our memory as an artist, the fine pages of which mention will be made in any future history of art, or the tentatives of art, during the nineteenth century, had ceased to believe and to pray. He had ceased to be a Christian. His was one of those vague and sensitive organisations, at once deep and open to external influences, that are passionately excited, intoxicated, attracted to absorption, and at certain moments even to annihilation, by the aspect of physical and agrarian nature.”* That at the approach of death and under his sister’s influence, he should have turned to God for succour and salvation, is nothing to the purpose. His faith *in articulo mortis* does not change his intellectual character prior to that date, and that character, so far as we can judge from his writings, is one on which religion had little influence.

It is a very different thing, however, for a critic to arrive

* *Nouveaux Lundis*, vol. iii. p. 157. Art. “On Maurice and Eugénie de Guérin.”

coldly at a conclusion such as this, and for a woman the two strongest feelings of whose heart were faith and sisterly affection, to accept such a conclusion respecting her brother. Eugénie was mistaken ; but her mistake was a very natural one ; and that she should have been dissatisfied with the portrait drawn by George Sand is very comprehensible. Nor was her regret merely momentary and evanescent. "To her, habitually regarding this world as a passing vapour, and the world to come as all in all, the fact that Maurice, the darling of her every thought, had been publicly described as a man who deified this world's beauty, was gall and wormwood. And the bitterness was intensified when she reflected that this description, impiously inaccurate as she thought, was the only one by which he would be known to his admirers and the public generally. Under these circumstances it became one of the main objects of her life to place this matter in what she conceived to be its true light, and a complete publication of all his manuscripts, accompanied doubtless by a biographical preface, seemed to her the best means of obtaining the desired end. Such a publication, however, she never lived to see. One of Maurice's friends, to whom she had confided the greater portion of his papers, proved faithless, acted with very culpable negligence, left her letters of remonstrance unanswered, and finally appears to have objected to return what he had made so little use of. These difficulties having been overcome, others supervened, so that at last she saw herself compelled to abandon the purpose of the evening of her short life. It was not till many years after she had been laid in the grave that the publication of her brother's works enabled us to judge how mistaken had been her views respecting him.

We have spoken of Eugénie's love for those of her own household ; but, strong as that love was, it did not monopolise her heart. There was a large place left in her affections for some three or four lady friends. She herself says it is true :

" No woman ever has or ever will be able to take the place which Maurice held in my heart. None, not even the most accomplished, has been able to offer me that same sympathy of intellect and taste, that large and evenly sustained suavity of intercourse. There is nothing fixed, no duration, no vitality in the sentiments of women. Their affections for one another are only pretty knots of riband. I notice this fragility of tenderness in all women-friendships. Are we incapable of loving one another in a different manner ? I do not know any instance to the contrary, either in the present or in history. Orestes and Pylades have no sisters. It provokes me when I think about it, that

you men should have something in your hearts which is wanting in ours."*

But though she speaks thus, the volume of her own letters would go far to disprove the greater portion of her own statement. The link of affection that binds her to her correspondents is no mere gossamer-band to break at the lightest strain. There are two, especially, for whom her love is deep, and strong, and true. One is the friend of her girlhood, Mademoiselle Louise de Bayne, and the other a friend of her maturer years, the Baronne de Maistre. To these by far the greater number of the letters recently published are addressed, and in all there breathes a spirit of graceful and sometimes of very deep tenderness. As regards the style of the letters themselves, it is but little if at all inferior to that of the *Journal*. She writes uniformly with force and grace, and especially with perfect ease. She always knows exactly what she wants to say, and never revolves in a purposeless kind of manner round her ideas. When her feelings are roused, her style rises naturally to the dignity of her theme; it does not seem to be ever ambitiously longing to swell itself out beyond its proper dimensions. Especially does she shun that pompous "writing like a book," which so many people mistake for clever correspondence.

Living the secluded life which we have described, and possessing but a very slender store of books, it was natural that Eugénie de Guérin's thoughts should turn frequently to nature's beauties of sight or sound. To one situated as she was this was almost a necessary outlet for those finer fancies that else might have been crushed by the monotonous recurrence of household duties. She loved nature in all its aspects, not indeed with the passionate self-sacrificing love of Maurice, but still with an affection that was strong, if perfectly reasonable. "I had a delightful awakening this morning," she says; "as I opened my eyes a lovely moon was sailing by in front of my window, and shining on my bed, shining so brightly that at first I thought it was a lamp fastened to the shutter. The white light was very sweet and pretty to look upon; and I lay watching, contemplating, and admiring it till it hid behind the shutter, and then peeped out again, and then disappeared like a child playing at hide and seek." This passage breathes a strong love of beauty for its own sake; so does the following, which is extracted from the next entry in

* Fragments at the close of the *Journal*, p. 444. French Edition.

the *Journal* : "I see splendid sunshine streaming from without into my little room. This brightness illuminates it, and retains me, though I ought to go down stairs. I am fond of all that comes from Heaven. Moreover, I admire my wall all tapestried with sunbeams, and a chair on which they fall like a drapery. Never had I a more beautiful room. It is a pleasure to be here, and to enjoy it as something of my own. O, what lovely weather ! I long to be revelling in it, to inhale great draughts of the fresh air which is so balmy to-day ; but this must not be till the afternoon. I must be at work this morning." Writing one summer evening in her little room, she says : "I would not leave you if I could help it. Indeed, I could spend the night here in describing all that there is to be seen and heard in my delightful little chamber, all that comes to visit me—little insects, black as night, little moths, spotted and marked, flying like fools about my lamp. There is one burning, another going away, another coming, and coming again, and, on the table, something like a grain of dust is walking about. How many inhabitants in this little space ? A word, a look given to each, a question respecting their family, life, country, would lead us into infinity ; better that I should say my prayers here at the window before the infinity of heaven." The following is like an exquisite little vignette : "What pretty things there are to be seen in the fields which I have just been looking at. A fine field of corn, full of reapers and sheaves, and of these sheaves one only standing, and throwing its shadow over two little children, while their grandmother gave them a breakfast of milk." But it was not in beauties that appealed to the eye alone that she took delight. Country sounds found an equally ready and welcome entrance into her mind : "On waking I heard the nightingale, but only a sigh, the hint of a voice ; I listened long, but heard no more. The delightful musician had only just arrived, and did but announce his arrival. It was like the first note of a grand concert. All sings, or is about to sing." Here is something in a different key. "What noise, what bursts of sound, what an accompaniment of rain, wind, lightning, shaking, and roaring—the terrible voices of the storm. And yet a nightingale sang the while, sheltered under some leaf or other ; you would have said that he was laughing at the storm, or trying to make his voice vie with the thunder ; thunder-clap and burst of melody made a delightful contrast, to which I listened, leaning on my window-sill. I enjoyed that sweet song, coming thus in the midst of the terrible uproar." And this

love of nature was not merely an acquired taste, the result of training and reflection. The woman was in this only the development of what the child had been.

“ If I had children to bring up,” she says, “ how gently and cheerfully I should set about it, with all the care bestowed on a delicate and fragile flower. I should speak to them of our good and gracious God in words of love ; I should tell them that He loves them even more than I do ; that He had first given me all that I gave them, and more besides—the air, the sun, and the flowers ; that He has made the heavens and so many beautiful stars. I well remember what a grand idea of God those stars used to give me, and how often I used to get up, after I had been put to bed, to look at them through the little window at the foot of my bed in the house of our cousins at Gaillac. I was caught there at last, and never again was I able to look at the beautiful luminaries. The window was nailed up, for I used to open it, and stretch out at the risk of falling over into the street. This proves that children have the sense of the beautiful, and that it is easy to inspire their hearts with faith and love by the teaching of God’s works.”

While we are indulging in similar extracts, we cannot resist the temptation of giving our readers the following bit of winter scenery :—

“ Christmas is over, that most beautiful of festivals, which I love above all others, and which brings me as much joy as it did whilom to the shepherds of Bethlehem. Truly the whole soul bursts into song at the joyful coming of the Lord, which is proclaimed on all sides by hymns and the pretty *nadalet* (a peculiar way of ringing the bells at Christmas time). Nothing in Paris gives any idea of Christmas. You have not even the midnight mass. We all went to it with papa at our head. Never was there a finer sky than that midnight one ; so that papa kept taking his head from under his cloak to look up. The ground was white with hoar-frost ; but we were not cold, and besides the air was warmed before us by the torches which the servants carried to light us on our way. It was very lovely, I assure you, and I should like to have seen you there walking with us towards the church through hedge rows, white as if with blossom. The frost produces such beautiful flowers. We saw one sprig so pretty that we wanted to make a nosegay of it for the blessed Sacrament, but it melted in our hands. All flowers are short-lived. I was very sorry for my bouquet ; it was sad to see it melt and dwindle drop by drop. I slept at the presbytery ; the curé’s good sister kept me there, and prepared me an excellent bowl of hot milk. Papa and Mimi returned to warm themselves at home by the great yule fire. Since then we have had cold and fog, everything that darkens the sky and throws gloom into the soul. To-day that the sun is shining brightly, I warm to life again, and expand like the pimpernel, that pretty little flower which only opens to the sun.”

All these passages—and our only difficulty in supplying them has been one of selection and not of discovery—are graceful and pretty. They show what pleasure Eugénie de Guérin had in the beauties of the changing seasons. But while with her brother this pleasure would have been its own end and reward, with her it was not so. Nature spoke to her continually of God, of the truths of religion, of the nothingness of this life. Her pen almost invariably glides away from pure description. She moralises over what she sees, sometimes in a way that is commonplace as regards the thought, though always graceful as regards the expression, and sometimes in a way that shows how—

“To her the meanest flower that blooms could give
Thoughts that did often lie too deep for tears.”

And we, following the course which those thoughts most habitually pursued, are naturally led, after speaking of her love for all outward objects of sense, to speak of that higher love to which these objects only ministered.

And perhaps it is, after all, from a religious point of view that Eugénie de Guérin's life and character offer most interest to us Protestants. Women who can write with grace and power may not unfrequently be found. Women who make the name of home almost synonymous with happiness, are known in almost every home circle. Votaries of nature have been by no means uncommon since the beginning of this century. But the religious life of a really devout Roman Catholic existing, so far as we can judge, untouched by any Protestant influence—a life, moreover, unveiled quite simply, and not for any polemical purpose—this is an object to which our attention is not often called, and that yet may be worth considering. We know so much of the evils of Rome, of her anti-Scriptural theology and execrable politics, that we are naturally somewhat sceptical as to the quality and amount of religious life that may exist among her children. When, however, it does appear that God, of His infinite mercy, has suffered a human hand to reach Him through the darkness of a pernicious creed—then, of charity, we should not hesitate to rejoice.

We say that Eugénie de Guérin's religion was utterly untouched by Protestant influence. There is no trace in her journal or correspondence of her ever having been brought into contact with any of our co-religionists, except indeed one courtly old gentleman whom she met in Paris, and he was only a casual acquaintance. With this exception, which

indeed scarcely deserves to be called one, she passed her life in practical unconsciousness that there was any other form of Christianity besides her own. Her father, as we have already had occasion to mention, was a devout Roman Catholic. So were all the people by whom she was surrounded who had any belief at all. Her education was, naturally, conducted on the same principles. When, therefore, the thought of giving her heart to God first presented itself to her mind, the Church of Rome would simultaneously present itself as the only channel of grace. To have entertained for a moment any doubt on the subject at any future time she would have held to be a grievous sin. That question she evidently held to be settled for ever. She never sought for a purer form of faith, nor did she ever feel any need for one. She was not versed in theological controversy, and indeed she declares that theological speculation and reading were distasteful to her. She was simply a woman who loved God, and served Him in the way in which she had been taught.

This way, however, was blessed to her, as all earnest striving after godliness is blessed. To us who are accustomed to regard, and have such good reason for regarding, the Roman system as a network of human institutions placed between man and his Maker, it is strange to find in what close communion she habitually was with God. The part which the priest, the saints, and the Virgin occupy in her thoughts and devotions is a very subordinate one. They are present, it is true; we have no desire to make her out a Protestant, which she was not; but ever, habitually, she looks beyond and above them, and her soul finds comfort and rest in Him who is "the true light that lighteth every man that cometh into the world." "God alone," she says, "can give us strength and resolution in this terrible struggle (against doubt and *ennui*), and however small and feeble we may be, with His help we shall at last hold the giant beneath our knee; but for this we must pray, pray without ceasing, as Jesus Christ taught us, and cry to 'our Father.' That filial cry always reaches the heart of God, and never goes forth unanswered. My friend (she is writing to her brother in the *Journal*), I should like to see you pray as one of God's children!" God's child; that is what she always feels herself to be. In her saddest hours she never lets go her hold on that blest assurance. The fiercest storm never loosens that anchor. Even in the darkest period of her life, when all earthly joy seemed gone for ever, and Maurice, the darling of her

heart, had only been one short week in the grave, she can write : " *

" We are separated ; God has placed himself between us. His will be done. He suffered Calvary out of love for us ; in love for Him let us kneel at the foot of His cross. I find this one very heavy, all covered with sharp thorns, but so was that which Jesus bore. May He help me to bear mine ! And at last we shall reach the summit. And from Calvary to Heaven the distance is not great. Life is short ; and what should we do with an eternity on earth ? If God will but make us holy, giving us grace to profit by trials, and tears, and tribulations, and anguish—which are the Christian's treasures. O, my friend, we have only to look at these things, at this world, with the eye of faith, and all changes."

And very shortly afterwards she writes in a similar spirit :—

" O, God, how the silence of any of my friends alarms me now ; I pray Thee to forgive me all my fears. The soul that is in communion with Thee, what has it to fear ? Is it that I do not love Thee, O God, who art the only true and eternal source of all love ? I think I love Thee, as the fearful Peter would have said, but not like John, who rested upon his Lord's bosom. I want the sense of Divine repose. What do I look for in created things ? Is it a human breast of which to make a pillow ? Alas ! I have seen how death takes such pillows from us. Jesus, I would rather lay my head upon Thy crown of thorns."

Descending in his usual airy manner upon " the religious life," and the " variousness of its setting and outward circumstance " among Catholics and Protestants, Mr. Matthew Arnold has drawn a parallel between Eugénie de Guérin's religion and that of Miss Emma Tatham—a parallel be it said very much to the disadvantage of the latter. For in Catholicism the " accessories have, it cannot be denied, a nobleness and amplitude which in Protestantism is often wanting to them," while in Protestantism they are often " provincial, mean, and prosaic." Let us, however, give the passage pretty nearly in full, as, like most of Mr. Matthew Arnold's later writings, it has had the merit—so far as merit was the cause—of attracting considerable attention. The article from which the extract is taken appeared originally, as we need scarcely remind our readers, in the *Cornhill Magazine*. It has now been reprinted among the author's *Essays on Criticism*.†

* Letter to the Baronne de Maistre, p. 300 of the *Lettres*.

† Macmillan, 1865.

“ While I was reading the journal of Mademoiselle de Guérin, there came into my hands the memoir and poems of a young Englishwoman, Miss Emma Tatham; and one could not but be struck with the singular contrast which the two lives—in their setting, rather than in their inherent quality—present. Miss Tatham had not, certainly, Mademoiselle de Guérin’s talent, but she had a sincere vein of poetic feeling, a genuine aptitude for composition. Both were fervent Christians, and, so far, the two lives have a real resemblance; but, in the setting of them, what a difference. The Frenchwoman is a Catholic in Languedoc; the Englishwoman is a Protestant at Margate; Margate, that brick and mortar image of English Protestantism, representing it in all its prose, all its uncomeliness—let me add all its salubrity. Between the external form and fashion of these two lives, between the Catholic Mademoiselle de Guérin’s *nadalet* at the Languedoc Christmas, her chapel of moss at Easter-time, her daily reading of the life of a saint, carrying her to the most diverse times, places, and peoples, her quoting, when she wants to fix her mind upon the staunchness which the religious aspirant needs, the words of Saint Macedonius, to a hunter whom he met in the mountains, ‘I pursue after God as you pursue after game;’ her quoting, when she wants to break a village girl of disobedience to her mother, the story of the ten disobedient children whom at Hippo St. Augustine saw palsied; between all this and the bare, blank, narrowly English setting of Miss Tatham’s Protestantism, her ‘union in church-fellowship with the worshippers at Hawley Square Chapel, Margate;’ her singing with soft, sweet voice, the animating lines :—

‘ My Jesus to know, and feel his blood flow,
‘Tis life everlasting, ’tis Heaven below;’

her ‘ young female teachers belonging to the Sunday-school;’ and her Mr. Thomas Rowe, a venerable class-leader—what a dissimilarity. In the ground of the two lives a likeness; in all their circumstances, what unlikeness. An unlikeness, it will be said, in that which is non-essential and indifferent. Non-essential—yes; indifferent—no. The signal want of grace and charm in English Protestantism’s setting of its religious life, is not an indifferent matter; it is a real weakness. *This ought ye to have done, and not to have left the other undone.*”

It is interesting, and sometimes amusing, to notice how frequently writers all into those very defects which they themselves have denounced or ridiculed. Dr. Newman, for instance, is a very determined opponent of the right of private judgment; he probably regards it as a very pernicious and arrogant claim on the part of poor human reason. And yet what Protestant among us has made more habitual use of that right than the man who has lately laid the workings of his mind bare in the *Apologia*; the man who began by subscribing

to the foundation of the *Record* newspaper, and is now the most able of English priests in the Oratory at Birmingham. Mr. Carlyle, again, has a special aversion for "windbags;" are his own writings entirely free from wordy commonplace dressed in a pretentious garb? Mr. Ruskin is now inveighing—and this is really startling—against "picturesqueness of statement" as one of the curses of modern literature. Albert Smith wrote a "Natural History of the Gent." And so Mr. Matthew Arnold, one of whose greatest bugbears is "provincialism," has, it seems to us, made proof of what he himself would call the "note of provinciality" in the passage just quoted. Nor, indeed, let us cursorily observe, is this the only passage from his works on which a similar charge might be founded. To our minds, we own, there is something very far removed "from the centre of good taste" in his habitual use of cant expressions—"note of provinciality," "the grand style," "Philistines," "Corinthians," and the like—that have no definite meaning for the general public whether educated or uneducated. There is something very crotchety and provincial too in the notion he seems to entertain—at least his practice would warrant us in supposing he entertains it—that the free use of French words, phrases, and forms of language, is the best means of reaching that ideal of academical English purity which is so desirable. Again, what are we to say of one who sees want of culture in everybody else's trenchant judgments, and yet, in a summary of the labours undertaken by the writers of the beginning of this century for the enlargement of our stock of ideas, says of Coleridge merely, that he "took to opium?"

To return, however, to our extract, which, for utter confusion of thought and statement, seems worthy of even so very provincial an individual as a Dorsetshire labourer. Was Protestantism responsible for the fact that Miss Tatham lived at Margate? Protestants do occasionally live in parts of England which for natural beauty are certainly not inferior to Le Cayla. Even in Roman Catholic France there are many small towns less picturesque than Margate, and quite as vulgar; only Eugénie de Guérin had the good fortune not to live in one of them. The fact is, this parallel is in every respect perfectly unfair. Though the family to which the gifted French woman belonged was much reduced in circumstances, it was both ancient and honoured. In its poverty it retained that gentleness of bearing which long traditions of nobility tend so much to foster. The people whom Mademoiselle de Guérin visited, on those rare occasions

when she left her home, held very good, and sometimes very high station in society. The solitude of her position, her distance from congenial intellectual companionship, and the meagreness of her store of books, were unquestionably mental disadvantages. If she had lived and died a mere ordinary country girl, there would have been no cause to wonder; for nature, though it has priceless gifts in store for those who know how to seek them, has not the power of creating love for itself. The disadvantages of her position were, however, mostly negative. There was little or nothing to produce her poetical activity of mind. There was something to encourage it when produced. But Miss Tatham's poetical gifts were cultivated under every possible disadvantage. The outward circumstances of her life—with which Protestantism had really nothing whatever to do—were prosaic in the extreme. Her parents belonged to quite the lower section of the middle classes. She was born in a house near Gray's Inn—one of the dingiest parts of dingy London. The first eighteen years of her short life were spent over her father's shop, in High Holborn, in close proximity to the noisiest of thoroughfares. Thence she moved, it is true, to a place where the beauties of sea and sky may be enjoyed, but where that enjoyment is marred as far as possible by motley crowds of uproarious holiday makers—a fair proportion of whom are probably Roman Catholics. Thus we have, to begin with, a marked contrast between the social and intellectual advantages enjoyed by Mademoiselle de Guérin and Miss Tatham. If it be strange that the former should have written so well, it is almost miraculous that the latter should have written, as she did, with grace and power. Nor is this all. The greater part of Miss Tatham's poems were composed before she was nineteen. She died when she was twenty-six. This was the age when Eugénie de Guérin penned the first of her letters which we possess, and her Journal was not begun till she was twenty-nine. In other words, their respective productions are those of a girl and of a woman in the full maturity of her powers; and the very faults of Miss Tatham's writing, of her prose more especially, are such as time would have corrected. Exaggerations of style and over-earnestness of manner are essentially the besetting sins of juvenility. There is, moreover, another point on which we would lay some stress, and which should be remembered in comparing the *refinement* of the religious influences by which Eugénie de Guérin and Miss Tatham were surrounded. It is that we study the Roman Catholicism of the former through the

medium of her own exquisite grace of thought and expression.

Is it, however, altogether true that in real refinements and external grace Protestantism is so inferior to Romanism? Might not a Methodist girl going to a country watch-night service describe her midnight walk in much the same terms as Eugénie de Guérin? Is it an unusual thing in an English parish for

“The clear church bells to ring in the Christmas morn?”

The expressions to which Mr. Matthew Arnold so much objects, and which he places in inverted commas, are not Miss Tatham's own; but is “union in church-fellowship” with any assembly of earnest Christian men, even though they chance to live in Margate, a mean or contemptible thing? Wesley's hymns happen to be the best in the language; and are not usually compared by good judges with the recent hymnology of the Church of Rome. The occupation of a “teacher in a Sunday school” would scarcely, we should have thought, be despised by the son of one who had so high an idea of the dignity of teaching as Dr. Arnold. We are very sorry, but a “venerable class-leader” is to us quite as really venerable an individual as “the Seraph confessing a legion of angels,” spoken of by Eugénie de Guérin in one of the few objectionable passages of her letters. The historical lore contained in the “Lives of the Saints” is, to say the least, apocryphal in character. Its stories are mostly childish. Eugénie herself says that, “it seems to her dangerous reading for many people.” Without a course of such unhealthy study, we do not think she would have believed or recorded the little miracle described at page 38* of her Journal, or had the same faith in the miraculous efficacy of medals as preservatives against accident and disease.† We confess that Miss Tatham's poems and history, so far from suggesting to us the painful contrast that they do to Mr. Arnold, teach us a very different lesson. They strike us chiefly as evidences of the power of refinement which Protestantism possesses. Miss Tatham, placed in the same

* It must not, however, be supposed that Catholicism is depicted as entirely *couleur de rose* even in Eugénie de Guérin's Journal. “I have been to Lentin, where I heard a very bad sermon, as I think. How the beauty of God's word is disfigured in passing through certain lips! One had need remember that it comes from above.”

† “When she was a little girl,” thus she writes, “she had made certain spots on her frock. In fear of being scolded she prayed to a picture in her father's room, and the spots were removed.”

social circumstances, would scarcely without religion have deserved so much of our admiration.

And, on the other hand, though to Mr. Matthew Arnold it may seem that the "religious life is at bottom everywhere alike," it is not demonstrable that Mademoiselle de Guérin suffered in many respects through the want of purity in her creed? We do not mean merely in matters of external grace, though even here there is an occasional taint of sentimentality in what she writes which healthier religious influences might have corrected, but in matters of greater importance. We have already quoted a passage in which she speaks of her fears lest her brother may be languishing in purgatory, and of her longing to do all she can for his relief. The same thought recurs over and over again in the Journal. With a persistency of horrible iteration her imagination conjures up pictures of his torments. "Perhaps he is there suffering, and calling to us amidst his groans as he used to do in bodily pain: 'relieve me you who love me.' Yes, my friend, by prayer. I am going to pray; I have already prayed for thee so much, and shall do so continually. Prayers! oh yes, prayers for the dead; they are the dew of purgatory." There is something here that jars upon Protestant feelings very painfully—something that seems rudely to disturb the sense of holy calm and rest in which we would enshrine the memory of those we love, who have died in the Lord. We cannot think of them as needing any longer the importunity of our prayers, or calling to *us* for relief. And so, not once, but many times in reading the Letters and Journals, we are struck by this thought: that in that old foundation stone of Protestantism, Salvation by Faith, Eugénie de Guérin would have found a rock of comfort and refuge. There is something of restlessness and effort in much of her religious experience. She seems striving with all the earnestness of her nature to work and suffer out her own salvation; and when she has done, her own good works, as was but too natural, seem paltry for so great a purpose.

Owing, perhaps, partly to this reason, the impressions which Eugénie de Guérin's writings leave on the mind is a sad one. It would, however, be only bigotry to ascribe the tone of melancholy which pervades them exclusively, or even mainly, to such causes. There is quite enough to account for it in the circumstances of her life. We have said that she was content with her lot; and so she generally was. It is beautiful to see one whose mind was so exquisitely gifted rejoicing in all a woman's homely duties. Yet there is no

doubt that Le Cayla, much as she loved it, was not a sufficiently active sphere for her. Almost unconsciously to herself the contrast between her daily life and her intellectual capabilities saddened her. And once or twice this latent feeling burst into expression, as when she cried: "Would to God that my thoughts, my soul, had never flown beyond the narrow world in which I am compelled to dwell." This passage in her Journal she had subsequently obliterated, as thinking probably that it did not breathe a spirit of resignation to the Divine Will. But the significant fact of its having been written remains. Besides this cause of *ennui* and sadness, there are hints of another in the Journal—hints which will perhaps find an echo in many a woman's heart, and to which we would wish to call attention with all delicacy and tenderness. She needed some object of love more exclusively and dearly her own than even father or brother; and whenever a child crosses her path, her whole heart seems to dilate with pleasure, and thoughts of even more than usual grace come flocking to her mind.

"A child's visit cut my story short yesterday, and I put my writing to one side without regret. I am as fond of children as I am of those who are poor and old. One of these children is very charming, quick, lively, inquisitive; he wanted to see and know everything. He watched me writing, and took the sand for pepper, with which he supposed me to be preparing the paper. Then he made me take my guitar down from the wall to see what it was. He placed his little hand on the strings and was enchanted to hear them sound. What is it that is singing like that? The wind which whistled loudly at the window also surprised him; my little room seemed in his eyes an enchanted palace, a thing that he will long remember, as I should, had I seen the palace of Armida. My crucifix, my St. Theresa, and the other pictures I have in my room pleased him highly. He wanted to have them all in his hand and to see them all at the same time, and his little head kept turning like a little mill. I watched him with infinite pleasure, entranced on my own side by all the charms of childhood. What must a mother feel for these graceful and loveable creatures? After giving the little Antoine everything he wanted, I asked him for a lock of his hair, offering him one of mine in return. He looked at me with some surprise. 'No,' said he, 'mine are prettier.' He was quite right; the hair of a woman of thirty is very ugly by the side of his fair curls. I obtained therefore only a kiss; but a child's kisses are very sweet. I feel as if a lily had rested on my cheek."

This, again, which is in a strain of even greater fervour:—

"But if a mother has a mother's griefs, she has so many joys. A child is something so pretty, so innocent, so tender. What happiness

there is in kissing them, in bringing them up, in educating them, in leading their souls to God. I long to see a little one about the house, that I may play the mother to it—rock the cradle, and fondle it. It would be a great delight to me to have the care of a little creature, to bring it up; its future, its happiness, the unfolding of its heart, would occupy all my thoughts. I should have no other thought in my heart. What happiness God bestows on a mother when He gives her a child—that is indeed a priceless treasure.” *

Another short extract, and then we shall have sufficiently indicated the cause of melancholy to which we allude: “Moreover, I have never been given to dream of greatness or fortune; but *how often* of a little home, remote from towns, very clean and neat, with its deal furniture, shining platters, trellised door, and hens! and myself there with I know not whom, for I would not have a peasant such as ours, who are boors and beat their wives. Do you remember ***?” If to these causes—an unsatisfying creed, monotony of life, and heart-yearnings for more to love, we add the bitter sorrows of her brother’s lingering illness and death, we shall find quite enough to explain the tone of melancholy that prevails in the *Journal*. And that tone is a very “deep autumnal” one. The thought of death is an almost habitual one with her. For days together she is often a prey to weariness and *ennui*. Take the following entry in the *Journal*, written on a winter day in February:—

“It rains. I was watching the rain, when the fancy struck me that I also would let my thoughts fall drop by drop upon this paper. It will clear my heart, which, like the sky above, is laden, not indeed with heavy clouds, but with something, I know not what, that vails the blue serene. I should like to smile on everything, and tears come unbidden to my eyes, and yet I am not unhappy. Whence is this? Apparently because our soul, poor exile, grows weary (*s’ennuie*) of this earth. There is Mimi at her prayers. I will do the same, and tell God that I am weary (*que je m’ennuie*). Oh, what should I do without prayer, without faith, the thought of heaven, without that woman’s piety which turns to love, to Divine love. I should have been lost, and without happiness on earth. You may believe me, I have as yet found none anywhere, in any human thing, not even in you.” †

Here we have her melancholy in its habitual form, and seeking its habitual relief. But what strikes us is that this relief is never permanently found. She never reaches any constancy of serenity. In this there is a strong analogy between Eugénie de Guérin and another young Roman

* *Letters*, p. 168.

† This is addressed to her brother.

Catholic lady only recently gone to her rest. We refer to Miss Procter. Both write habitually on the most mournful themes, and both look to God for help in their sorrows. The latter's constant purpose is to show that there is light in all gloom if we will but turn to it. And yet, notwithstanding the respectability of the moral both in Miss Procter and Eugénie de Guérin, we will own that, to our minds, there is something morbid and unhealthy in this new form of the "literature of despair." The very frequency and earnestness of the effort to shake off the load of care betrays the very imperfect success of each preceding effort, and the permanent character of the burden. God does not mean His creatures to be always miserable; and habitual serenity is a better and nobler attitude of mind than melancholy.

It is not, however, with words of disparagement that we would bid farewell to Eugénie de Guérin. Where there is so much to admire, so much with which we can sympathise, why dwell unduly even on what we may have a right to consider faults? Of the remaining circumstances of her life we have scarcely anything to record. Her Journal ceases in 1840, and subsequently to 1841 her printed letters are very few. Of her last moments we know nothing, save the bare fact that she died at Le Cayla on the 31st of May, 1848.

ART. VII.—*Life and Letters of Frederick W. Robertson, M.A.*
Edited by STOPFORD A. BROOKE, M.A., late Chaplain to
the Embassy at Berlin. Two Volumes, with Portraits.
London: Smith, Elder, and Co. 1865.

A LIFE must not necessarily be stirred by many events to afford materials for an interesting biography. Mr. Robertson's career was the ordinary clergyman's history in two or three chapters—his school-days, his university course and ordination, his first curacy, his last charge, and his end; a life that winds itself obscurely in and around the masses like a hidden stream, blessing the soil without making a noise, and losing itself in the distant deep without observation. Such generally is the unexciting path of the men who belong to the profession of the late Incumbent of Brighton. And yet we have little doubt that this minister's life, in two bulky volumes, will have as wide and rapid a circulation as a book of travels, or a memoir of campaigns and heroes. The truth is that the sermons of Robertson have certain qualities that awaken the curiosity of the reader to know the author. We want to learn the habits of a man whose works show so profound an analysis of himself: we wish to get nearer to him than his sermons, to inspect, were it possible, the processes of a mind whose formal efforts display such audacity in speculation, such decision in realms of thought where even wise men, perhaps the wisest, have been content to feel their way with uncertain steps: we are not unwilling to look into the studies and circles of an author whose compositions, disclaiming all pretensions to artistic style, illustrate some of the best features of prose writing. Mr. Brooke has been favoured with abundant materials to satisfy the inquiries of the public; and his disposition of them gives to the memoir the character of an autobiography. The staple of the work consists of letters, which in the first volume are threaded together upon a narrative, and then the text almost entirely disappears. This arrangement no reader will regret; for the letters are either important as marking the periods of Robertson's mental history; or they are interesting as personal disclosures of the man.

The leading facts of his life may be set down in a few lines. He was born in London in the year 1816, at the

house of Colonel Robertson, his grandfather. His father was also a military officer, a captain in the Royal Artillery ; his three brothers gained an honourable place in the same profession. "I was rocked and cradled," he writes, "to the roar of artillery, and the very name of such things sounds to me like home." He had an extraordinary passion for arms, even from childhood ; his earliest playthings were mimic battlefields, forts, and weapons. It was not the passing humour of a boy : the desire for a soldier's life struck a root into his soul, and not only grew into a purpose, but when that purpose was cut off, it reappeared in the noble chivalry of his character, in some of his political views, in his sympathy with working men, whom he loved as an officer loves his favourite troop, and to the last it lingered in the imagery of his diction. His father, in an honourable solicitude for the religious life of Frederick, whose piety was not the least remarkable feature of his boyhood, discouraged the military bias of his son. Robertson's principal school-days, before entering the university, were passed first in a grammar school in Beverley, then with an English tutor in France, whither his family had removed in 1829, and lastly in Edinburgh, where he spent two years chiefly in the New Academy, under the late Rev. John Williams. Here, like other youths, similarly placed, he dreamed, sauntered in romantic walks, wrote verses, and made fast friends. But, not like many young men, his life was singularly pure ; and to the routine of school studies he brought the same ardour with which he admired a landscape, the same conscience that made him abhor a vice. It was impossible for such a student to fail : he gained several distinctions, and only lost the chief honour by the arbitration of the Professor, who, after an equal race, bestowed the prize for the best Greek scholar upon his rival. On his return home from Edinburgh "the secret wish of his heart" was held in check by his father's strong objections to expose his piety to a barrack life, and it was suggested that Frederick should enter the Church. "Anything but that," said the young man, "I am not fit for it." He was then articled to a solicitor ; but the confinement of office work, in a profession "he detested," impaired his health in a few months ; and Captain Robertson wisely resolved that his son should "follow the bent of his genius." The promise of a commission in the Indian army, in a dragoon regiment, kindled all the soldier within him ; and he set himself to master the theory of his new calling with that patience for detail which even *his* ardour could never surprise. He inured himself to

the daring of horsemanship, he practised shooting, and became an expert draughtsman ; but he pursued quieter studies with equal zest. History, geography, strategy, engineering, the plans of celebrated campaigns, all were separately mastered during the two years in which he had been kept waiting for a commission. But he was going to India to be a soldier for Christ as well as a military leader for his country ; and he made himself acquainted with the history and conflicts of Eastern Missions. He gathered all the information then within his reach concerning the religion of the Hindoos, and searched for the reason why the Gospel had done so little for them. This incident is worthy of notice, because at that time, 1836, the spiritual wants of India were almost unknown in this country, and certainly unheeded. The expected favour from the Horse Guards was still delayed, and the young aspirant's heart was sick with long waiting. It was supposed by his friends that as his hope was disappointed his resolution might be moved ; and the Church was again proposed. To satisfy one whom he greatly loved he promised to reconsider the matter; but his mind never wavered. The authority of his father once more pressed against his decision, but it stirred not. "No, never !" said he, when Captain Robertson advised him to be a clergyman. Three weeks after he matriculated at Brasenose, Oxford, "and, accepting, somewhat sternly, his destiny, he began his university career." Three weeks after—but during this time there was a coincidence of suggestion in the counsels of several friends ; and his mind, ever watchful for indications higher than his own preferences, withdrew its resistance from what might possibly prove to be the will of God : he entered the Church with profound reluctance : "he shrank with deep pain from completing the sacrifice." His disappointment slept, but never died ; it would sometimes awake at the measured tramp of a passing soldier, and sometimes cry out when any minor failure irritated his regret. But once fairly settled in his new career, he never allowed this feeling to qualify his ministerial consecration. That his work would have had another aspect and been accompanied with more personal felicity, if the Church had been his first passion instead of the army, is not to be questioned. But under any circumstances of dedication, he could not have more earnestly, more ardently, given himself to his work. Oxford, when he entered the University, was in the Tractarian convulsion : he mastered the literature of the controversy, and his judgment on the writings and efforts of Mr. Newman and Dr. Pusey may be gathered from the following prayer which he composed at

that time :—“The enemy has come in like a flood. We look for Thy promise. Do Thou lift up a standard against him. O Lord, here in Oxford we believe that he is poisoning the streams which are to water Thy Church at their source. . . . Lighten our darkness in this University with the pure and glorious light of the Gospel of Christ. Help, Lord, for the faithful are minished from among the children of men. My Father, I am like a child, blown about by every wind of doctrine. Let not my inconsistent selfish conduct be a pretext for blasphemy against Thy saints, and persisting in heresy.”

There is no other noticeable circumstance that marked his collegiate career; but we must carefully observe his views of the Gospel and his spiritual state when he was ordained for the ministry and entered upon its duties in Winchester. His biographer’s words on this deeply important matter are remarkable :—“ Among the temptations of Oxford he had lived a Christian life, and grown in Christian experience, and now his realization of Christ as his Saviour and his personal friend was as deep and vivid as the love and labour which grew out of it into ministerial fruitfulness.” And, again, “ To this resting-place God brought him not only through the means of external influences, and of his own thirst after righteousness, but also through the natural drift of his character.” The following extract from another of his prayers, composed about this time, is an incidental proof of the spirituality of his mind and the earnestness of his consecration :—“ Bring into captivity every thought to the obedience of Christ. Take what I cannot give : my heart, body, thoughts, time, abilities, money, health, strength, nights, days, youth, age, and spend them in Thy service, O my Crucified Master, Redeemer, God. Whom have I in heaven but Thee,” &c. His doctrinal views of salvation at this period may be gathered from his second interview with M. Malan, of Geneva, during Robertson’s visit to Switzerland in 1841. In his account of the conversation he says, writing to a friend, “ My chief point was to prove the death of Christ, not merely a demonstration of God’s willingness to pardon, on repentance and obedience, but an actual substitution of suffering.” In this spirit and in this faith he began his work in Winchester, preaching the doctrines of grace from “ *the resting-place to which God had brought him*,” and proving the reality of his ministry by the labours which he pressed into every day, “ as a cart is pressed full of sheaves.” So far as we can learn the occupation of his secret hours, his exercises in the closet, supplied the inspiration of his preaching and supported the asiduity of his pastoral toils. Of his spiritual enjoyment

during these early days of his ministry he affords us a grateful impression in a letter written many years after. "I recollect," he says, writing from Brighton in 1850, "how far more peaceful my mind used to be when I was in the regular habit of reading daily, with scrupulous adherence to a plan, works of this description." He refers to Brainerd, Martyn, and Thomas à Kempis. Now what does Mr. Brooke tell the readers of this biography when referring to Robertson's early sermons? "*They contain all the characteristic doctrines* against which he afterwards deliberately protested at Brighton." This startling contrast in the subjects of his preaching is also associated with an equally surprising diversity in the calibre of his intellect and character. In Winchester and Cheltenham he was a "dwarf," in Brighton he was a "giant." While he held and preached "the evangelical doctrines" he was in bondage, he carried a burden; his struggle to renounce his first and cherished beliefs was an encounter with Apollyon; his daring surrender of them was "an emerging victorious," Mr. Brooke tells us, and "he went up upon the hills to see with clearer vision than before, through the glass of faith, the shining of the celestial city." We have another illustration of his progress, in which the image is far more accurate. "At Brighton he struck out boldly into the open sea. There was no hesitation, no reticence in his teaching. In the silence and solitude of the mountains of the Tyrol, his 'soul, left to explore its own recesses, and to feel its nothingness in the presence of the Infinite,' had fixed its foundations deep and sure." The image to which we refer is *the open sea*; the concluding thought escapes criticism in the haze of poetical expression; but we quote the passage because it refers to another visit to Switzerland and Germany which he made in the year 1846, and from which dates the great revolution of his doctrinal views and of his ministerial character. By what processes of reasoning, acquirement and watching did he attain that higher revelation of the truth as it is in Jesus, which his biographer affirms to be the distinction and glory of Robertson's later teachings? He left Cheltenham for the continent a thoroughly dissatisfied man. He had been shocked by the gross hypocrisy of certain evangelical professors; and suddenly adopted the view that the cultivation of mere devotional feelings was dangerous: hence he abandoned the reading of such books as Martyn and Brainerd. He had read Carlyle continuously, and compared metaphysical speculations with a philosophical friend in Cheltenham, whose friendship "influenced him largely: " a

gentleman "who had faced as subjects of intellectual enquiry those questions which Robertson had faced as subjects of personal spiritual experience." His preaching had become embarrassed by something like insincerity: for his keen sense of honour detected this fault through any garb it might choose to wear. "As to the ministry," he writes, "I am in infinite perplexity. . . . Yet to continue it when my whole soul is struggling with meaning I cannot make intelligible—when I am perpetually bewildering people, and saying the thing I do not mean—to go on teaching and preaching when my own heart is dark and lacks the light I endeavour to impart. . . . is very wretched."

In this state of mind he reached Germany; in this state of mind "he then plunged deeply into German metaphysics and theology," and he "got so far as this: *moral goodness and moral beauty are realities, lying at the basis and beneath all forms of the best religious expressions.*" (?) He had previously suspected them to be "utilitarian conveniences," or "dreams;" but now having boldly sounded through fathoms of doctrine, tradition, impression, and speculation, he found moral truth and moral beauty at the bottom, and anchored! Poor Robertson! We would speak tenderly of a man of genius, and watch with respectful sympathy the walking about of a noble spirit seeking rest; an enchanted knight full of chivalry and puissance, the unconscious victim of the spell of some spirit, whose wanderings become sacred and almost sublime when they are followed by so much greatness and valour. But when it is maintained that these troubled movements of Robertson's mind were advancements in the knowledge of Christ's truth, that as a priest he drew nearer to God than before, and nearer to man, teaching the divine law with more clearness, and approaching on behalf of his charge the Divine Majesty with more acceptance, and bringing away more blessing, we ask for proofs. Let us be distinctly understood. That change in his views which we believe to have been *error*, was unquestionably followed by intense mental activity. He proudly accepted the solitude of his position in Brighton, and all his rare powers rose up to meet the trial. He was still sincere; as bravely resolute to do good as when, in newly-kindled zeal for Christ, he called sinners to repentance in Winchester. He could still smite with an arm that had recently grown stronger and more "cunning of fence" the enemies of truth and goodness; and in general Gospel terms, made bewitching by Platonism and poetry, he could yet beseech men to be reconciled to God. We must allow, moreover, that in the expositions of his ministry, where the sacred text is not

dogmatic and final, his thoughts and lessons instruct by their wisdom no less than they charm by their eloquence. All this, and more that is honourable to Mr. Robertson's character and creditable to his talents, we are prepared to grant. But was the new era of his intellectual life, first definitely announced at Brighton, the dawn to the preacher's heart and labours of *a brighter spiritual day?* In his elucidation of *doctrine* we look in vain for accuracy of exegesis and for clearness of statement. In his treatment of difficult subjects, where the intelligible limits of theology fade away into metaphysics, he fails to win an inch from the obscure: nay, his explanations and deductions leave a mist where he found a light. His philosophy of the eternal goodness and beauty is the key by which he opens all problems; but he only unlocks imaginary doors and takes imaginary possession of imaginary strongholds. His attempts "to seize and hold the spirit of every truth which is held by all systems under diverse forms," are dexterous as feats of ingenuity; but though they "make the unskilful stare," they "cannot but make the judicious grieve." In a letter which he writes to a Roman Catholic friend he describes his method of finding "the soul of goodness in things evil." Mrs. Jameson had shown him the sketches she had made for her new work on Christian art, exhibiting the gradual progress in the worship of the Virgin. "At first the sculptures were actual copies of known heathen goddesses with a child in arms; then the woman kneeling before the Son; next the woman crowned on a throne with the Son, but lower; after that, on the same throne, on a higher level; and lastly the Son in wrath, about to destroy the universe, and the mother interposing her woman's bosom in intercession. These were distinctly different in date. Well," continues the writer, "I remembered at once that this is what the evangelicals do in another way. They make two Gods, a loving one and an angry one—the former saving from the latter. Both, then, agree in this, that the anger and the love are expressed as resident in different personalities. Now, here I get a truth. Not by eclecticism, taking as much of each as I like, but that which both assert; and then I dispense with the formal expression of the thought. The Son and the Virgin, the Father and the Son, opposed to each other; this is the form of thought, in both false; the human mind's necessity of expressing objectively the opposition of two truths by referring them to different personalities, leaving them thus distinct, real, and undestroyed by a namby-pamby blending of the two into one, I recognise as the truth of both." Passing by, for the present,

what Mr. Robertson attributes to the evangelicals; let us see what he dispenses with, and what he preserves. He dispenses with the personalities as they are imaged opposing each other, the Son and the Virgin, the Father and the Son; and he retains the truth that the mind is compelled to express the opposition of its ideas, by referring them to such *dramatis personæ* as may be within its reach! But we may as well dispense with both, for there is no reality in either. The mind has no such necessity as Mr. Robertson ascribes to it. The ideas of justice and mercy have no opposition that requires to be expressed by personalities; there is no confusion in the perception of their separate claims, and their concurrent activity in the same mind is perfectly intelligible. But Mr. Robertson was determined to find a truth in the picture of the Virgin pleading for the universe, arresting the destroying arm of her Son; moreover, the adoration of Mary is a doctrine that has come down to those who uphold it with the sanction of centuries. There *must be* a good underlying so ancient and popular a rite. Mr. Robertson found it; it is too rare for criticism to detect; and, in any case, is not so satisfying as the substance from which he eliminates it. When he thus extracts sunbeams from cucumbers, we prefer the cucumbers to the light. But what shall we say of Mr. Robertson's treatment of the "evangelicals" in the passage quoted above? Is it a fair statement of their views of the Atonement to make the evangelical scheme the reconciliation of "two Gods—a loving God, and an angry God—the former saving from the latter?" They believe in the anger of God, in the anger of "the Lord Jesus taking vengeance on them that know not God," and in the anger of the Father, whose wrath "is revealed from heaven against all unrighteousness of men," and in the anger of the Holy Spirit who "sware in [His] wrath that [unbelievers] should not enter into His rest;" they believe also in the equal love of the ever-blessed Trinity; but in what exposition of "the faith" from the evangelical school do we find the sacred persons *contending*, making the process of reconciliation a struggle, and the decision of redemption a victory? Yet Mr. Robertson himself had been an evangelical, had loved the evangelicals, and preached their doctrines with all his heart; and that a mind of much natural candour and nobleness should have allowed so gross a misrepresentation to escape it, can only be explained by the mournful reflection of Coleridge:—

"Alas! they had been friends in youth;
But whispering tongues can poison truth;

And constancy lives in realms above ;
 And life is thorny ; and youth is vain ;
 And to be wroth with one we love
 Doth work like madness in the brain,
 And thus it chanced, as I divine.”*

“The evangelical ‘scheme’ of reconciling justice with mercy,” says Mr. Robertson, “I consider the poorest effort ever made by false metaphysics. They simply misquote a text. That he might be just [and yet] the justifier. Whereas St. Paul says the just and the justifier—*i.e.* just *because* the justifier.” (!) One of the most serious evils of theological controversy is the effect of its *animus* upon the attainments and other intellectual qualifications of the antagonists. Here is a scholar who would have given fair play to an ordinary classical author; collating diligently if the text were doubtful; elucidating with grammatical severity if the construction were involved; and translating with equity if the unlearned required the passage; and yet, in perfect sincerity, he explains away all the sense from a New Testament writer to wrest the authority of St. Paul from an “evangelical” doctrine. Let any critic study the whole argument of the Apostle, and then judge between Mr. Robinson, who adds, “just *because* the justifier,” and his opponents who do not “misquote,” but explain, just (and yet) the justifier. See another example of “free handling” in Vol. I., Letter 29, p. 66, “*Because ye are sons—sons before regeneration.* Regenerated, that is, endued with a spirit of sonship because sons.”

As to the philosophy of “the evangelical scheme,” Mr. Robertson laughed at “*the poorest effort ever made by false metaphysics.*” Yet Jonathan Edwards gloried in it. “We had provoked God to anger,” says this profound and wary thinker, “His wrath abode upon us, and we needed to have it appeased. This is done for us in this way of salvation; for Christ, by shedding His blood, has fully satisfied justice, and appeased God’s wrath for all that shall believe in Him. By the sentence of the law we were condemned to hell; and we needed to have our sins pardoned that we might be delivered from hell. But in this work, pardon of sin and deliverance from hell is fully purchased for us.”† Mr. Robertson was an admirer of the American divine, and in the earlier, and, we must think, happier, period of his ministry was a diligent student of his writings. The evan-

• *Vide Letter LXXII. vol. i.*

† *The Wisdom of God Displayed in the Way of Salvation*, Section III. 1.

gelical doctrine was not, it is true, an effort of metaphysics with Edwards ; but he vindicated it with a reasoning to which the airiest abstractions were familiar, and he sealed the conviction of his judgment with the higher approval of his life.

We have performed this part of our task by constraint, not willingly : but Mr. Robertson's sermons have taken hold of the public, and the volumes before us will revive the impression of his teaching. We believe that much of that teaching is unsupported by the divine oracles: we believe that the change which an unhappy conjunction of circumstances produced in his convictions was from light to obscurity, from a position and progress in the *old paths* to a wandering in untravelled ways leading nobody knows where ; we believe that notwithstanding the sunny gleams of thought and hope that dazzle us in many of his sermons, and despite the cheerful and resolute tone of his correspondence, Mr. Robertson was not a happy man during the Brighton period of his ministry, nor in the highest style of result a successful preacher. Not long before his death there occurred the following incident, which he himself relates in one of the letters of the second volume : "On Sunday, after service, a lady came up to me whom I had known in the very outset of my ministry. She talked with me of the past ; and then said with tears, 'But, oh, you are so changed in mind, it is quite heart-aching to hear you preach ; it was no longer the bright, happy Mr. Robertson.' The truth is, I had been preaching on St. Paul's thorn in the flesh, and this would partly account for what she remarked. Yet conversation with her brought back those days at Winchester strongly, and I felt that she was right, and that the shadows of life had settled down." Not the ordinary shadows of life we fear, but the gloom of a mind that had lost some confidence in the success of its work. He was too noble and too good to mistake popularity for success ; and the crowds that flocked to Trinity Chapel to hear unusual eloquence, and to be stirred by original thinking, could afford him little compensation for the loss of others who left a ministry that led them to no resting place. Referring to a member of his congregation, who, after listening to him for years, wrote him a letter expressing dissatisfaction at his views on the Atonement, and a resolve to quit Trinity, he exclaims, " How long will the rest remain ? Only until they clearly comprehend what I surely try to make plain as my meaning ; then I shall be alone, as I expected years ago. Still, this desertion, one by one, is painful."

In the present day, when theological thought is shifting to

and from form speculation to dogmatism, our only hope is the stationary oracle of the Bible. When some advise us to consult an inner light, and others invite us to shelter a doubting mind behind the traditions of a church, and others insinuate a misgiving, whether the light within us is not, after all, darkness, and the Church without us is not a fiction, the grand old Book is at our elbow, like the nearest haven into which the hunted vessel runs for covert from the pursuing gale. They tell us that we cannot illumine its mysteries, we cannot reconcile its discordances, we cannot answer half the questions that challenge our confidence ; all these restrictions of capacity or information we humbly acknowledge ; but the doctrines that mainly concern us are few, sharply defined, and readily found if the search be sincere and diligent ; and by their authority we can try what we hear and what we read. However imperfect our knowledge, still it is a knowledge that *rests*, not in respect of progress, but in the finality of the basis. It saves us from being “carried about by every wind of doctrine.” Without such a place for our feet, every current and eddy of opinion would sport with us ; now we can sport with them : we can make excursions on sea or in air and still be at home : we can follow the soarings of genius, listen to the music, and share the radiance of the “sons of the morning ;” and when we are wearied with the flight or appalled at the elevation, we can at any moment drop into our nest. The hope of the Church in the present day is in the maintenance of two or three simple truths—*salvation, only through the crucified Saviour, assured to us, and accomplished in us by the Holy Ghost.* And only inferior to the truths themselves are the textual formulas in which they are enshrined. The letter killeth when there is nothing inside, the letter preserveth when there is. And as the fundamental truths of a science would never be available for use without an *accepted expression* of them, so the spirit and life of Christian doctrine would have an imperfect and always a disputed currency among us without “the form of sound words.” Mr. Robertson treated the forms of Scripture as if their connexion were discreditable to the truths they conveyed ; but he gave them forms of his own, the least evil of which habit was imposing a disguise upon what should easily be recognised.

The last two or three years of Mr. Robertson’s life make a sad and touching narrative. Measured by any standard of ministerial duty, he was no ordinary worker. But with him there could be no economy in the consumption of the brain.

There was in his case so electric a sympathy between intellect and emotion, that reasoning was the indulgence of passion, taste the uneasy and ever-escaping impressions of inspiration, and his nervous system answered to both as intimately as they communicated with each other. Whatever he did cost him the energy of body, soul, and spirit. Even those exertions of mind which are commonly most sedate in their action consumed him like fire. Long before his death he felt he was dying; but this born soldier never gave in! In spite of relentless paroxysms of agony, in spite of the consciousness of failing powers and declining efficiency, he would know nothing of the discretion of valour; he fought on—his arm wearied, his weapon broken, his resolution high and disdainful; and when struck down, “he shook the fragment of his blade.” So passed away in the *mélée* of a great fight one of the bravest spirits of the host.

BRIEF LITERARY NOTICES.

Apologetic Lectures on the Fundamental Truths of Christianity.
Delivered in Leipsic in the Winter of 1864. By Chr. Ernst
Luthardt. Translated from the Third Edition by Sophia
Taylor. Edinburgh : T. and T. Clark.

A REMARKABLE book, exactly hitting the times, and one which all earnest thinkers, and especially all earnest leaders of other men's thoughts, will do well to study. "Two views of the world," the author affirms, "stand opposed one to the other, and contend together for the sway of the modern mind:" and regarding it as "the task of the advocates of the Christian view, to show, in the presence of modern thought, and by the resources of modern intellectual culture, that it, and it alone, is the satisfactory solution of the problem of all existence, of human life and its enigmas, of the human soul and its inquiries," Dr. Luthardt addresses himself to the work of establishing apologetically, on the basis, and, in some sort, after the manner of Pascal, "that Christianity is truth, truth ever young and always fresh, universal truth, and, therefore, equally adapted and equally satisfying to all ages and all degrees of civilisation." Our *illuminati* will smile at the audacity of such a thesis; and it is certainly chivalrous. But the author is equal to his undertaking; and with readers who are not resolved beforehand to be dissatisfied with whatever reasoning molests their fancies, or crosses their will, he will be held, at all leading points, to have made out his case, and to have proved, that while the humanistic and naturalistic theory of the universe is as rotten in its logic, as it is magnificent and self-opinionated in its theorising, Christianity is the only true key to the mysteries of earth and heaven. After tracing historically the "views of the world," which in ancient and modern times have opposed the Christian doctrine respecting it, the author proceeds, in a series of brilliant yet closely reasoned arguments, at once to combat these antagonist theories, and to vindicate and maintain the truth which they garble or deny. The paradox of man's relation to the world; the anomalies of our knowledge, feeling, and will; the riddles of life in all their multitudinousness and complexity; he contends, finds no solution apart from the revelation of Christ. So, with regard to the Divine existence, "Atheism is not a necessity of the reason, but an arbitrary act of the will." Pantheism, considered as to its practical tendencies, "annihilates religion, abolishes the very postulates of morality, and destroys hope":—at the same time, viewed scientifically, it is utterly wanting, for it only lives by carrying on a perpetual juggl

between the finite and the infinite ; and the conscience and the heart of man are alike outraged by its imbecile attempts to meet their just and peremptory claims. The Scripture doctrine of a personal God is the one verity, in which the demands of our intelligence and of our moral constitution together are fully and completely answered. In like manner, as against all Pantheistic and purely materialistic views of the origin of the world and of man, the author argues the scientific truth of creation, in the proper sense of the term, and of the unity of the human species. Then, keeping his eye steadily fixed on the positive and constructive, rather than on the destructive and negative, Dr. Luthardt goes on to show, that whereas religion is a universal and absolute necessity, Christianity is demonstrably the only religion worthy of human nature and of God ; and that, while our mental constitution, on the one hand, and our moral condition on the other, imperiously call for miraculous revelation, Christianity, by the facts of its birth, by the course of its history, and, above all, by the person and character of its Founder, is certified to us, beyond rational question, as such a revelation, as indeed, the one, sole, grand, universal, all-comprehending, Divine discovery of God and of the truth of God to man.

We give but a glimpse of Dr. Luthardt's reasoning. Our readers must follow it for themselves. No young Englishman of the present day should fail, if possible, to read these very striking and valuable lectures. The matter of them is not all new ; the logical points are not all put with equal force ; and here and there we may remark what is dubious or weak ; but as a whole the work is one of singular originality, beauty, force, and moral impressiveness ; and for effectual dealing with contemporary religious anxieties and errors, nothing could be more timely, or, in the main, more suitable and contenting. Questions of faith, such as those which now agitate the public mind, will never, it is true, be settled on the field of controversy alone ; but, so far as they belong to this field, Dr. Luthardt discusses them with great fairness and ability ; and, what is not his least merit, all through his work he points with unerring finger to the real sources of modern unbelief, and to the only proper method available for the finding and holding of the truth. The value of the book is much enhanced by copious "notes" to the lectures ; containing, amongst other elements, the original passages, classical, German, French, or whatever else, on which the author builds, in representing the views whether of the opponents or the advocates of the Christian system.

Personal Names in the Bible Interpreted and Illustrated. By W. F. Wilkinson, M.A., Joint Editor of Webster and Wilkinson's Greek Testament. Strahan : London. 1865.

THIS is not a dictionary. It is something better. It is the commentary of a scholar, without the technicalities of scholasticism, upon the personal names of the Old and New Testament, arranged under classes, and viewed as to their etymology, and as to the relations in

which they stand to the doctrines and historic facts of Divine revelation. Apart from the personal names which Scripture declares to have been directly imposed by God, the author rightly regards the great bulk of the biblical words of this order as "illustrative of the history, customs, national character, institutions, and religion" of the Jewish race and of other peoples, who came more or less into contact with the Jews during the time of the sacred records; and he endeavours at once to make the things hold a candle to the names which they created, and the names in turn to speak out the things which they embody and symbolise. Mr. Wilkinson's idea is a happy one, and it is carried out with admirable learning, taste, discretion, and vigour of treatment. "The Nature, Origin, and Use of Proper Names," "Surnames," "Names of God," "Proper Names formed from the Names of Heathen Deities," "Birth Names," "Sacramental Names," "Miscellaneous Names," "Heathen Names," and "New Testament Names," are the chief topics of the author's work; but the series of headings conveys only a meagre impression of the fulness and variety of the contents of the volume. Students of Scripture will do wisely to possess themselves of this very charming, high-toned, and valuable book.

The Sacred Steps of Creation. By Rev. J. Marsden, B.A.
Longmans: London. 1865.

RATHER more than a year ago, Burnet's "Theory of the Earth" was placed in the hands of the author. He read it, and, with the new lights of geology and ethnology about him, was perplexed and troubled. He bethought him of what he had "long neglected," the "Hebrew tongue." He dug in "that mine" and found "pearls." "The result," he says, "may be seen in the publication before the reader." "There were six sacred steps or advances in creation, and they occupied six days, or periods. God begins creation with the earth, which was then existing without stratification, either vertical or horizontal. It had an abyss of water on the side opposite to the sun, and the abyss was consequently dark. The earth also being without rotation, was nearly covered with water on the side facing the sun. The attraction of gravitation from the sun acted on the face of the waters, and was employed during the first day drawing the earth into daylight. This was the first creative advance—an Azoic period. The second embraces the formation of an atmosphere, and consequently comprises the beginnings of life. The third advance is a rotatory earth, a necessarily ensuing appearance of dry land, and a carbonigenous era, composed of stemmy herbage and productive trees distinguished by having their seed not in the fruit, but *in the tree itself*. The fourth day is occupied in a transition from a variable eccentric orbit, to a primary periodic one, so as to make the sun, moon, and stars to rule over the day and over the night; and to be serviceable for signs, set times, days, and iterations. The fifth advance is the

creation of watery reptiles, saurians, insects, pterodactyls, and flyers with winged tails. This period is brought to a close by the creation of Venus, which forms the oolite and cretaceous systems, and causes the earth to revolve in a secondary orbit. The sixth and last sacred step of God is the creation of the tertiary animals, whilst the earth revolves in the secondary orbit. In the midst of this day there is a pause. Mercury is created, a tertiary orbit is the result, and man—that is, pre-Adamic man—appears. The whole is closed by a Sabbath of Rest." Subsequently, "with a view to redemption, the creation of immortal man occurs, and ultimately a deluge, caused by a diminution of rotation, as may be inferred from 2 Peter iii. 5, 6." After this specimen of the yield of Mr. Marsden's pearl-mine, his readers will not be surprised to learn, that the true rendering of "Tho-hû and Vo-hû, "in Gen. i. 2, is "Tho-hû, without stratification, and Vo-hû, without cleavage, that is, crystallized;" that the author knows no reason why the soul of Lazarus needed to be *carried* by the angels to Abraham's bosom, and why the angels in Jacob's vision required a ladder to go up to heaven, except that "even things spiritual" in some sort gravitate to the earth; that when "the unfeigned earth," in the beginning, nestling under the maternal wings of gravitation, had been "conducted by a first day's journey into daylight," and then by "another day's progress" had been "clothed with a fitting atmosphere," the Creator not improbably "called in the law of pentagonal symmetry as a secondary instrument in forming living organic bodies through creative typal assimilation;" that "it has pleased God to overrule and utilize the mind and labours of Professor Owen, to confirm . . . His word;" that the fluid disturbances caused by the introduction of a new planet into the solar system "will account for the formation of strata and the embedding of fossils;" that pre-Adamic men "were mortal, had no souls, and perished like the beasts with their organisation," possibly distinguishable, however, from "the gorilla," as having *quasi-moral faculties*, as well as a different kind of *blood*, and as possessing *dominion*, which gorillas have not; and that "the serpent" of Genesis was one of these same pre-Adamic men, acting the wizard's part ("serpent" should be understood as "a magician who used the serpent in his enchantments") under the instigation of the Devil. Shall we give more of the "pearls?" They may be found in plenty in Mr. Marsden's volume. We believe Mr. Marsden is sincerely desirous to harmonise the apparent disagreements of Scripture and modern science: and for this praiseworthy intention we honour him. But he is not competent to do this. At present he understands neither science nor revelation; much less has he the ability to make the two one. The science, the Hebrew, and the biblical exegesis of this book are all wretched together. What were the friends of the former "Mawson Scholar of Corpus Christi College, Cambridge," and present "Rector of Burstow, Surrey," doing, that they could allow Mr. Marsden to send forth to the world, in the name of religion and modern enlightenment, this superlative piece of literary trash?

La Vie Eternelle. Sept Discours, par Ernest Naville, Ancien Professeur de Philosophie à la Faculté des Lettres de Genève. Troisième Edition. Paris. 1863.

THIS volume was in its third edition three years ago. How many editions it may now have passed through we are not able to say ; it has been but lately brought to our notice. Such are its merits, however, that we lose no time in introducing it to our readers. In the edition before us, there are advertisements of translations into Russian, German, English, and Italian. The English translation is published by Dalton, and dedicated by permission to the Bishop of Ripon. It appears that the discourses of which the volume consists, or, as we should call them in this country less properly (for they were not read), the lectures, were delivered at Geneva, in December, 1859, and were afterwards reproduced with amendments in Lausanne, in January, 1860. They were taken down in short-hand by reporters, were afterwards revised by their author, and so were published.

Admirable lectures they are ; dealing frankly, unshrinkingly, with modern objections, in a spirit at once of complete intelligence and of the truest candour, of the most Christian gentleness and of absolute loyalty to Scripture and evangelical orthodoxy. Coming as they do from Geneva, echoing as they do the best thoughts of the school of Vinet and Pressensé, dealing as they do with the doctrines of the schools of Schérer and Rénan, we heartily recommend these lectures to the study of all earnest Christian thinkers. The subjects of the "discourses" are, the problem of human destiny, materialism, the thoughts of humanity, the Gospel, science and faith, the Christian doctrine of eternal life, and religion. We especially admire the criticism of the first three chapters, particularly in relation to "positive philosophy" and materialism. We remember nothing so calm, so well balanced, and so masterly. The French throughout is beautiful ; and English speakers and writers cannot fail to be instructed as well as charmed by so engaging and lucid a specimen of discourse on the loftiest and most important matters of human thought.

The Heavenly Father. Lectures on Modern Atheism. By Ernest Naville. Translated from the French by Henry Downton, M.A., English Chaplain at Geneva. London : Macmillan. 1865.

PERSONS who know what platitudes pulpit, press, and platform are just now talking on the subject of the Divine Paternity, may feel their suspicions roused by the title of this book. They may fear to find in it one more contribution to that miserable pile of sentimentalism and quasi-scientific dogma, under which "modern thought" labours to smother, not only the grand Christian verities, but also the fundamental religious beliefs of human nature. Such persons, however, have

not made the acquaintance of the biographer of Maine de Biran, and the author of *La Vie Eternelle*. The lectures on "The Heavenly Father," like their predecessors on "Eternal Life," are the offspring of a mind possessed to its depths by the true faith of the Gospel, at once too serious and too robust either to amuse itself, or to seek to amuse others, with philosophical dreams. M. Naville's Lectures are, in fact, a brilliant and profoundly scientific exposure of the weakness and mischievousness of the various types of modern disbelief in God, and at the same time a noble constructive argument for the Divine existence, for the fact of creation, and for the reality of that just and beneficent rule of the Almighty Being, which the Scriptures and Christianity everywhere postulate and affirm. Our idea of God; life without God, viewed with reference to the individual and to society; the revival of Atheism; nature and man in relation to the doctrine of God; God as the Creator and Father; are among the author's chief topics, as formally stated in the headings of his Lectures;—and these topics are all handled with a logical force and subtlety, which, apart from the Christian earnestness, the manly sense, and the bewitching eloquence which distinguish M. Naville, must command the respect of his most unwilling hearers. "The Heavenly Father" is a book which young men, haunted by the ghosts with which philosophic speculation has peopled the intellectual atmosphere of our times, should read and digest into their mental substance.

Elijah the Prophet: an Epic Poem. By G. Washington Moon,
Author of "The Queen's English." London: Hatchard
and Co. 1866.

MR. MOON has taught the Dean of Canterbury some lessons, which he certainly ought not to have needed, but as certainly did need, and, at the same time, has instructed many besides, in this day of genteel slang and slip-shod writing. Mr. Moon, however, can not only lay down the laws of good prose composition; he is himself an example of something more than poetic susceptibility and culture. In this beautiful volume there are many sweet thoughts and tender touches, and many highly finished passages. But the whole is marred by association with prosisms, which smack of the starched and stereotyped propriety of a literary *petit maître*.

The following stanza will exemplify our meaning—

"The brightest jewel in the costliest shrines
Where God is worshipped is humility;
'Tis like a star which trembles while it shines,
And, through its trembling, brighter seems to be;
That jewel, in its purest brilliancy,
Adorned Elijah's character. With men
He was a man! and bowed to none! But he
Before Jehovah was a child; and when
He thought of all God's love to him, he wept again."

Perhaps this is hardly a fair sample. Mr. Moon is seldom weaker than in this instance. In some parts of his work there is sustained beauty of a superior order.

The Interleaved Greek New Testament. London: Elliot Stock.

ALL careful students of the Greek Testament know the advantage of having a copy so ordered as to enable them without loss of time to set down, side by side with the text, such "notes and comments" as suggest themselves in the course of reading. The volume before us is intended to meet this requirement. It is the last Leipsic edition of Tischendorf's smaller *Novum Testamentum Græce*, interleaved with stout ruled writing paper, and put into a neat binding of calf and cloth, which is neither too elegant to use, nor too flimsy to bear the vigorous handling of a man with whom books are tools.

The Gothic and Anglo-Saxon Gospels, in Parallel Columns, with the Versions of Wycliffe and Tyndale; arranged, with Preface and Notes, by the Rev. Joseph Bosworth, D.D., Professor of Anglo-Saxon, Oxford, assisted by G. Waring, Esq., M.A. London: J. Russell Smith. 1863.

THE Gospels as rendered by Ulphilas, by the unknown authors of the Anglo-Saxon Version, and by the two great builders of the English Receptus, all standing together in a well-printed, handy, inexpensive octavo, call for thanks alike from literature, philology, and religion. The names both of the editors and publisher of this important volume are a guarantee of excellence; and their established reputation is only heightened by the manner in which they have sent forth the quaternion of Scripture Texts here offered to the public. The Gothic is a new recension, following in the main the late Professor Uppström's edition of the famous Uppsala Codex. A Cambridge MS., believed to belong to the close of the tenth century, forms the chief authority for the text of the Anglo-Saxon Gospels. Wycliffe's version is printed from a MS. written about A.D. 1389, and now preserved in the Bodleian, Oxford. The first edition of Tyndale's New Testament, published in A.D. 1526, supplies the contents of the fourth column of Dr. Bosworth's Teutonic Polyglott. The translations are accompanied by historical and critical prolegomena and notes, which have the rare merit of being neither so scanty as to be equivalent to nothing, nor so cumbrous and overwhelming as to hide the object which it is their function to illustrate. Prefixed to the volume is a beautiful coloured facsimile of the Uppsala MS., together with facsimiles of the other originals, written or printed, on which the texts presented in the work are based. It is not a small addition to the serviceableness of the Anglo-Saxon

Gospels, as here exhibited, that the long vowels are distinguished from the short ones by a mark of quantity. We are thankful for this improvement upon some earlier editions of the version. It may be proper to add, that Dr. Bosworth's book is published on large paper, quarto, as well as in octavo, and that, in this more dignified style, it is as handsome and elegant as it is intrinsically solid and useful.

The Oracles of God : an Attempt at a Reinterpretation. Part First. The Revealed Cosmos. By Henry F. M. Pratt, M.D. London. J. Churchill and Sons. 1865.

THERE are persons with whom it is either a necessity of nature, or a point of honour, to dispute whatever other men are agreed upon. If the rest of the world says Yes, they never fail to say No; and if all besides themselves say No, you may calculate with absolute certainty upon their Yes. We do not think Dr. Pratt is a member of this troublesome fraternity; but he bears a painful resemblance to them. He has a philologico-theological crotchet; and despite all that reason, history, and the universal consent of divines and scholars affirm to the contrary, he holds to his crotchet, and, not only so, he persists in urging it upon the attention of his age as a grand scientific and religious discovery, which, if recognised and duly applied, will bring on a millennium of enlightenment and concord for the dark and troubled earth. Dr. Pratt is convinced that the Hebrew of our Bibles, and all extant translations from it, are an entire mistake: he is persuaded, that, except himself, no human being—at least, none since the days of the authors of the Septuagint—has ever read or interpreted correctly the sacred text of the Old Testament: he is satisfied, that, to some good degree, he has possession of the charm which will open this sesame: he feels assured that in the light of his linguistics, revelation and science may find their meeting-place, and a new era of spiritual illumination be inaugurated for mankind: and in the present volume, carrying out more completely the scheme of his “Genealogy of Creation,” published a few years since, and noticed soon after in this Review, he furnishes an elaborate argumentative exposition of what he deems to be the true reading and meaning of the first chapter of Genesis, and, upon this foundation, proceeds to rear a system of physical and ethical dogmas, which, as he imagines, are necessary and all-important sequences of his criticism. Our readers shall not be wearied with lengthened excerpts from Dr. Pratt's Bible. His revised edition of the first five verses of the Pentateuch will suffice both for us and them.

“To accomplish the incarnation God created the heavens and the earth. And the earth was surging and swaying, but inert as to the phases of development, and a mighty wind *was* rushing over the surface of the waters. And God said, ‘Let *there* be volcanic action,’ and *there* was volcanic action; and God saw the volcanic action that *it was* good; and God caused an antagonism between the volcanic action and the inertia; and God called the volcanic action ‘The Active Condition,’

and the inertia He called 'The Passive Condition.' And it was decomposing, and it was recomposing, the first evolution."

Who will not hope for literature and human destiny after this? We believe Dr. Pratt to be an amiable and excellent man; but his philosophical faculties, through some cause or other, are in an infinite muddle; and, if he will hear us, he is wasting a world of ingenuity, time, and labour upon what everyone, but himself, must regard as the merest intellectual cobweb and hallucination.

Theology and Life. Sermons, chiefly on Special Occasions. By E. H. Plumptre, M.A. London: A. Strahan. 1866.

A CHARMING and richly suggestive book, full of thoughtful criticism, of noble Christian philosophy, and of delicate yet forcible discussion of some of the great religious and ethical questions of the day. We are not at one with Mr. Plumptre on all points. We dissent from several of his interpretations; for example, from that which makes St. Paul deliver the very superfluous affirmation, that "all God-inspired Scripture is profitable." We think Mr. Plumptre, in common with many modern theologians, altogether misses the Scripture "idea" of the death of Christ in making it simply the consummation of the sacrifice of His life. Surely it is not the life, perfect or imperfect, but the death of Christ, considered *per se*, which constitutes the focus and climax of the Bible revelation. "His death which He should fulfil at Jerusalem" here is the central and all-absorbing interest of both Testaments. Mr. Plumptre, too, fails, as we judge, to give prominence enough, in the practical parts of his Sermons, to what is really the foundation and main-spring of all Christian life, whether in clergy or laity—a personal reconciliation with God, as at once the first demand and the primary grace of the Gospel. The want of clear views and of explicit teaching with regard to this capital doctrine of Christianity is, we believe, the true key to more than one of the spiritual and ecclesiastical puzzles which the accomplished author here endeavours to unlock. Whatever blemishes, real or supposed, however, may attach to this volume, we cannot but speak in the highest terms of the reverence, the moral earnestness, the charity, and the refined and tender Christian sentiment which pervade and beautify it. It is a book which an unwise man can hardly read without becoming wise, and which no wise man will lay down after perusal without sensible increase of his mental and religious stature.

Prehistoric Man: Researches into the Origin of Civilisation in the Old and the New World. By Daniel Wilson, LL.D., Professor of History and English Literature in University College, Toronto. 2nd Edit. London: Macmillan. 1865.

No one who attended the sittings of the Ethnological Section of the British Association, during the last Newcastle meeting, will fail to remember the eloquent address of Dr. Wilson of Toronto, and, in par-

ticular, with how great courage, fairness, and judgment he put the case of the difficulties as between Modern Science and the commonly accepted views of the Scripture Revelation. We never heard the case put more wisely; and the general feeling, on both sides, was one of gratitude and admiration for the speaker, and of cheerful hope as to that eventual harmonising of the two spheres of thought and fact, which all good men desire, and which, they know, will by and bye be effected. In his great work on Prehistoric Man, now, we are glad to see, in its second edition, Dr. Wilson holds the same tone; and while insisting that human sense and reason shall not be taught to lie in the supposed interest of religious truth, while himself following rigidly and persistently the methods of inductive science, he never loses sight of the Bible, never allows its records to stand for nothing, but invariably accepts the oracle when plain, or waits for the interpretation of it when dark, and with sure finger points forward to a coming day of full illumination and discovery. The aim of his work is to define, so far as may be, the character and condition of man prior to the birth of civilisation; prior, indeed, to the earliest periods to which history, properly so called, enables us to trace his existence and action on the earth. The vast western continent obviously presents this problem to the scientific inquirer under the simplest and most satisfactory conditions. And Dr. Wilson, who has had rare opportunities of studying it on American ground, throws much of his strength into the determination and discussion of the phenomena belonging to this part of the domain of his question. His range, however, is cosmical. Pre-historic man of the Old World and the New, continental and insular, more ancient and more recent, all comes into his argument: and drift-implements, language, observances relating to the use of fire, buried tools, and other works of art in wood, shell, stone, ivory, and metal, rock-sculptures, sepulchre-caves, mines, mounds, barrows, gods, altars, skulls, and a crowd of other witnesses, monumental and traditional, are made to testify what man was, and how he lived before the first historic forefather of Montezuma, Alaric, Scipio, Pericles, Confucius, Sennacherib, or Osirtasen, either blessed or troubled the ages. The objects which come into view in the course of his large induction are numerous and diversified enough; and if the faces of some of them are familiar, not a few have the interest attaching to the little-known and unique: the tool-bearing river gravels of France and other countries; the onomatopoeic words of the Indian and Australian tongues; the contents of the Aurignac cavern; the Aztec fire-festival and the Peruvian sun-worshippers; ancient British coracles and Esquimaux skin-canoes; the art remains of the so-called periods of stone, bronze, and iron; Carib shell-knives and Asiatic sacred shell-vessels; the shovels, mauls, and axes of the mysterious copper-workers of Lake Superior; the metallic currency of the old Mexican race; the primeval mounds of Ohio; the buildings of the Incas; the portrait-carvings of Central America and Yucatan; the Palenque hieroglyphics; the jade hatchets of the Cordilleras; the tomb-relics of Peru; and, not to name more, an extended

series of facts relating to the physiological characteristics and tribe-migrations of the aboriginal inhabitants of the Americas. The conclusions to which Dr. Wilson is brought by his investigation are briefly something like these: first—That, while we are by no means as yet in a position to speak with certainty, appearances strongly favour the belief that man has lived on the earth much longer than our common chronology would make him; secondly—That, whereas man from the beginning indubitably possessed the faculties of reason, religion, and speech, the testimony of all monuments of every class goes to show that, prior to the beginnings of history, his normal condition was deteriorated, and, though not a savage, he was not, in the ordinary acceptation of the term, civilized; and, thirdly—That, while great difficulties cumber the question of the original relations of man as found in the Old World and in the New, the scientific facts belonging to language, to the domestication of animals, to the sources of civilisation, to agriculture, to alphabetic characters and numeral signs, and to art and science in general, all point towards one primeval birth-place and home of our species, and that the very one which the Scriptures indicate as its geographical cradle and starting-point.

It is matter of no great moment; but should this notice chance to fall under the eye of Dr. Wilson, it may not be uninteresting to him to be acquainted with two facts connected with certain passages of his work, and with the data upon which some of his conclusions are founded. The first has reference to the human *crania* collected by Dr. Morton in Egypt, and now, we presume, forming part of the great Philadelphia collection. We know, on unquestionable authority, that Dr. Morton was practised upon by the persons who assisted him in the collecting of these crania, and that skulls were palmed upon him as ancient Egyptian, which were worn by men of much younger date, and of other than Egyptian stock. The second fact belongs to the famous Horner borings in the Nile mud, of which Dr. Wilson speaks with quite as much respect as they are worth. On the same authority which enables us to make our first statement, we further know that (in the neighbourhood of Damietta, we believe) the late Sir Robert Stephenson found in the deposits of the Delta, at a greater depth than was ever reached by Mr. Horner's deepest diggings, a brick bearing upon it the stamp of *Mohammed Ali*!

Dr. Wilson's book is charmingly printed; and the numerous illustrations, some of them coloured, are executed with a force and delicacy not to be surpassed. We promise all readers of this very valuable work an abundant harvest of interesting facts, and of thoughtful, cautious, and well-aimed philosophical reasoning.

The Tragedies of Sophocles. A New Translation, with a Biographical Essay. By E. H. Plumptre, M.A. Two Vols. London: A. Strahan. 1865.

In translation, at least, criticism and poetry are seldom agreed; the one belongs chiefly to the realm of mind, the other to the realm of feeling;

and, though they are not at enmity, they refuse to work together except at distant intervals and for short spaces. There never yet was a poem carried over from one language into another where full satisfaction was given to the claims both of learning and of genius. Either the one power or the other has yielded. Every such work is a compromise. The accomplished author of the translation before us proceeds on this principle. While aiming at as precise a reproduction as possible of the form, not less than of the spirit, of his original, Mr. Plumptre knows very well, that Sophocles can never be Sophocles out of his own Greek; and he proceeds accordingly. For the dialogue he adopts what every English scholar must feel to be the fitting metrical exponent of the Greek senarian, "our blank heroic verse." The choral parts of the plays he renders, so far as may be, by metres answering in their general character to those used by his author, without binding himself absolutely, however, to the identical rhythm, much less to all the subtle variations or minute correspondences which mark the strophe, antistrophe, and other lyrical members of the dramas. This is surely the right method; and we congratulate both the translator and the public on the manner in which it has been applied in these beautiful volumes. Our acquaintance with other publications of the writer would lead us to believe, that nature and culture together have formed Mr. Plumptre on a model not unlike that of Sophocles. His fine moral instincts, his intellectual strength, his delicacy of perception and feeling, his high taste, all answer to the Sophocles' type, and qualify him for a task to which mere passion, or intellect, or technical knowledge, would of itself be wholly unequal. The result of his labours is admirable. Whatever may be thought of the adequacy of particular renderings, no competent judge will hesitate to pronounce, that the English reader has here, in the main, a worthy representation of the thought and art of the matchless creator of the *Oedipus* and *Antigone*.

A Light thrown upon Thucydides, to illustrate the Prophecy of Daniel, as to the Coming of the Messiah; in Remarks on Dr. Pusey's "Daniel the Prophet," and in reply to Dr. Hincks on the Metonic Cycle and Calippic Period. To which is added a Review of Dr. Temple's "Essay on the Education of the World." By Franke Parker, M.A. London: Williams and Norgate. 1865.

We were frightened on opening this volume. A writer who commences by telling you that he is blessed with "an enquiring mind," that he has plenty of books, and that, as a clergyman, he has not eaten the bread of idleness, sets up a board to warn off all comers. Mr. Parker, however, is not as weak as his painful title-page and ill-judged overture might seem to intimate. His book is published in the interest of Scripture truth; and both Biblical and classical scholars, whose studies take the direction of chronology, will find much to interest them in its

contents. Large portions of the work appeared originally in the pages of the *Journal of Sacred Literature*. If learning, labour, and ingenuity, will carry theories into favour, Mr. Parker may calculate upon the general suffrages of his generation. We do not suppose he will win these suffrages. His arguments and conclusions, however, deserve attention ; and on many points he is indisputably master of the field, and does important service to the cause of literature and Christian faith.

1. **The Kabbalah : its Doctrines, Development, and Literature.**
By Christian D. Ginsburg, LL.D. London : Longmans. 1865.
2. **Jacob ben Chayim's Introduction to the Rabbinic Bible, Hebrew and English.** By Christian D. Ginsburg, LL.D. London : Longmans. 1865
3. **The Essenes; their History and Doctrines.** By C. D. Ginsburg, LL.D. London : Longmans. 1864.

WE are glad to meet Dr. Ginsburg again. His *Canticles and Ecclesiastes*, published some years since, and noticed at the time in these pages, have long made him a notable citizen of the world of Biblical letters and criticism ; and he never speaks without adding something to our previous stores of literary knowledge.

The tendencies of modern thought, and the constantly growing attention paid to the history, philosophy, and faith of the further East have given a new importance of late to the religious mysticism of the *Kabbalah*. To most Englishmen, however, the *Kabbalah* is as much a *terra incognita* as the geology of Japan. No work devoted exclusively to this subject is to be found in the English language ; and the scanty information respecting it, conveyed by a few passages in our ecclesiastical histories and elsewhere, is not always to be trusted. In the first of the three volumes named above, Dr. Ginsburg endeavours to supply the lack in question, by furnishing extended analyses of the leading Kabbalistic doctrines, and of the books which contain them ; by exhibiting arguments which may serve to assist in determining the date and origin of the *Kabbalah* ; and by describing the historical "development" of the system, with "the different schools into which its followers are divided," as also "the literature" called into existence by this strange theosophy as age has followed age. All this the author has accomplished with much learning and labour ; and no intelligent person need now remain in ignorance as to what the *Yes tirah, Zohar, and Commentary of the Ten Sephiroth*—the Kabbalists' Bible—really are, and what is their general teaching on the grand points of which they treat, namely, the Nature of God, the Cosmogony, the Creation of Angels and Man, the Destiny of the Universe, and the Import of the Revealed Law. Dr. Ginsburg's acquaintance with his topics is formed at first hand ; and he has conferred a lasting boon upon English students of

Scripture and of mankind, by the light which he has shed upon one of the dark chapters in the history of literature and of religious thought.

Jacob ben Chayim, whose name leads off the title of the second work by Dr. Ginsburg, mentioned in our list, is a familiar of all readers of the great Rabbinic Bibles of the sixteenth and following centuries. He was a Tunis Jew; he was the literary saviour of the Massorah; and to him we owe it, that "the grand critico-exegetical apparatus," bequeathed to posterity by the Massoretes, was "for the first time collated, compiled, and given to the world in a printed form." Dr. Ginsburg has here reproduced in square Hebrew characters the text of Jacob ben Chayim's "Introduction" to the Rabbinic Bible, from "Frankfurter's magnificent edition; Amsterdam, 1724-1727. . . . collating it carefully with the text of the 1546-1548 [edition], that is, the second edition of Jacob ben Chayim's Bible." He has likewise translated the text into English, adding foot-notes, designed to illuminate such parts of it as require the aid of a candle. Both the editing and the translation are worthily executed; and for this good service also the author merits the best thanks of our Biblical scholars and Divines.

The treatise on the little-understood and much-misrepresented Essenes fills another gap in our literature, and calls for further acknowledgments to Dr. Ginsburg. The writer first exhibits and discusses the cardinal doctrines and practices of the Essenes, as they are delivered by the seven ancient writers, whose accounts form all but our only authorities on the subject, namely, Philo, Pliny, Josephus, Solinus, Porphyry, Eusebius, and Epiphanius. He next furnishes in chronological order translations of all the passages in which the authorities treat of the Essenes. The last section of the work contains a sketch of the most important modern literature relating to these most interesting Quaker-Methodists of the later ante-Christian Judaism, beginning with De Rossi, and ending with Hilgenfeld, Graetz, and Hirschfeld. Foot-notes accompany the whole, and add considerably to the value of a work which no student of the New Testament and of Church History should leave unread. The Greek quotations scattered through the book are woefully printed; and we differ from Dr. Ginsburg in some of his theories, both historical and linguistic. He has our hearty thanks, however, for this as well as for his other recent contributions to the rising cause of Biblical scholarship in this country.

Etude sur les Origines Bouddhiques de la Civilisation Américaine.

Par M. Gustave d'Eichthal. Première Partie. Extrait de la Revue Archéologique. Paris: Didier et C^e. 1865.

ANCIENT Chinese authorities inform us, that in the fifth century of our era (A.D. 458) five Buddhist missionaries from *Ki-pin* (Bokhara) went to *Fou-sang*, a distance of twenty thousand *li* (more than four thousand miles), east of *Ta-han* (Kamschatka), and there preached and propagated the religion of Gotama. M. Eichthal, in agreement with

De Guignes, though against Klaproth, maintains that *Fou-sang* is the western region of the American continent: and coupling the presumed historic fact above referred to, under the form given it by this hypothesis, with a number of considerations founded on the nature of the case, and on the practices, traditions, and architecture of various American-Indian tribes, he argues that the Buddhism of Asia is one principal source of the civilization of the ancient Mexicans, and of other aboriginal populations of the New World. Amongst the particulars to which he calls attention, as supporting his view in some or other of its branches, are the horrible religious swingings of the Mandan Indians, compared with those of Hindustan; the tradition of the Flood, as held by the same people, with its strange correspondences to the first and second *avatars* of the Brahminical Vishnu; the curious figures and tracery of the Palenqué ruins in Yucatan, viewed side by side with well-known Buddhist remains in India and elsewhere; and, last not least, the remarkable cross-legged, stooping statue at Uxmal, with its fan-like headdress, so much akin to that of certain Buddhas found on monuments in Java, Ellora, and other places in Continental and Insular Asia. We cannot say that M. Eichthal's arguments produce in us any strong conviction. With the single exception of the Uxmal sculpture, it requires a vigorous fancy to identify the American and Asiatic figures which the author's plates bring into juxtaposition; and it would not be hard to account for some others of the phenomena embraced by his induction without calling in the aid of Buddhism. In the present state of our knowledge, we are hardly justified, we think, in going further than this: that, while the facts which the writer marshals point unequivocally to Asia as the geographical parent of native American faith and culture, there seems reason to believe, that Buddhism contributed something—how much we are unable to define—towards the complex result of a series of influences acting under different forms, and, in all probability, at various pre-historic periods. The subject is one of high interest, and we shall eagerly follow M. Eichthal in his further investigations on this remote and little trodden ground.

Constitutionalism of the Future; or, Parliament the Mirror of the Nation. By James Lorimer. A. & C. Black. 1865.

THE delay of the Reform question has given opportunity for a great many attempts to bring the constitution of Parliament within the domain of scientific polities; and in this book a thoughtful writer lays down a principle upon which he thinks representation may be based. The principle is that electoral power should be apportioned, as nearly as possible, according to actual social power. Cumulative votes, therefore, should be given on the grounds of citizenship, age, property, and education, with extras. The idea is far from new; but, while it has the advantage of an intelligible basis, it throws nearly out of sight the question which must, we think, for a long time to come be the main

question in the House of Commons, namely, whether a proposed reform is or is not likely to produce a better legislative machine. Nor do we think it possible to represent formally in any schedules, however complicated, the subtle forces which really determine the movements of society. Yet this little book is worth reading by any one who takes an interest in parliaments in the abstract; or, perhaps, who is reading for twenty years hence. It is a strong protest against the rule of numbers; and it contains some bold criticism of two well-known positions of Mr. Mill (to whom it is dedicated):—(1) that under equal and universal suffrage all social influence would tell politically at their full value; and (2) that the political education of the lower classes is a proper ground for giving them the franchise. Both these views Mr. Lorimer combats with some force.

The Gnostics and their Remains, Ancient and Mediæval. By C. W. King, M.A. London: Bell & Daldy. 1864.
The Natural History, Ancient and Modern, of Precious Stones and Gems, and of the Precious Metals. London: Bell & Daldy. 1865.

THESE elegant volumes, by the well-known author of *Antique Gems*, are a mine of curious and important information on the subjects of which they treat. The earlier of the two, devoted to the exposition and illustration of the Gnostic system, particularly as known to us through sculptured gems from Egypt and elsewhere, deserves the best attention of theologians and scholars. The historic elements and sect distinctions of Gnosticism; the mysteries of the Abraxas and the Mithras worship; the scheme of the Ophites; the Isiac and other idolatrous symbols; the rout of talismans, charms, and amulets, whose name is legion, the gnostic origin of some of the tokens of modern freemasonry; on these and similar topics Mr. King has much to say, which even readers of Epiphanius and of Matter's noble *Histoire Critique* will do well to hear; while the numerous engravings of the volume, with the descriptions accompanying them, open an all but unknown world to the student of ecclesiastical history and of theosophic day-dreaming and profaneness.

The author's later and larger volume, on "Precious Stones and Metals," is a work of singular beauty and instructiveness. His object is to give in succession "the natural history of each species" of gems, its chemical composition, its origin, the place producing it, its distinctive characters, the counterfeits of it, and its ancient and present value. Gold and silver, as being the most precious of all stones, not technically "precious," are likewise included in his plan. Within our present limits we can only say, that Mr. King's programme is carried out in his book with admirable learning, taste, and completeness of treatment. All time and all literature are ransacked for material; but the critical eye is everywhere present, and the reader is never abused by the recital of dubious or irrelevant facts. An appendix contains a metrical trans-

lation of the so-called poem of Orpheus on Gems, with dissertations on the Jewellery of the Ancients, on the Chemical Analysis and Selling Prices of Precious Stones, and on other subjects of interest. Beautiful tail-pieces from the antique embellish the volume, which is equally worthy of a place in the study of the scholar, and in the drawing-room of the man of wealth and refinement.

Diamonds and Precious Stones: their History, Value, and Distinguishing Characteristics. By Harry Emmanuel, F.R.G.S. London: Hotten. 1865.

WE cannot speak too highly of this very substantial and beautiful book. Mr. Emmanuel writes with great advantage as being himself a jewel merchant; and his work throughout is more practical in its character than Mr. King's. At the same time the hand of the man of letters, reading, and science, is everywhere manifest, and a great mass of rare and valuable matter is wrought up by the author into a form which is equally distinct and graceful. For brief yet comprehensive and trustworthy information as to the properties and characteristics of precious stones, as to the countries in which they are found, and the manner in which they are collected and prepared for use, and as to their value in different ages and among different peoples, we know no work to compare with this charming volume. One interesting fact, not commonly known except to dealers in gems, is illustrated by several parts of Mr. Emmanuel's work. It is commonly supposed that the diamond is the most precious of all stones; and in the general this is true. But there is a stone with which, under certain conditions, even the diamond cannot compete. Over about a carat or a carat and a half weight, the "finest and purest rubies" of the genuine "vivid pigeon's-blood colour" are worth considerably more than brilliants of the same weight, however splendid; and rubies of only two or two and a half carats, such as now described, will at the present time fetch twice the price of diamonds in the European market. "No mention shall be made of coral or pearls; for the price of wisdom is above rubies."

The Agamemnon of Æschylus and the Bacchanals of Euripides, with Passages from the Lyric and Later Poets of Greece. Translated by Henry Hart Milman, D.D., Dean of St. Paul's. London: Murray. 1865.

DEAN MILMAN ought to be able to translate Æschylus and Euripides as well as any man living; and many parts of the two tragedies, which he here offers to English readers, are as just to their originals as translations can hope to be. The dignity, solemnity, and terrible rush and wildness of the lyric passages are often reproduced with great effect; and the pains taken to present the dialogue in a faultless and impressive rendering are not unfrequently rewarded with a success

which leaves little to be desired. There is a good deal of clay, however, mixed with Dean Milman's gold. The privilege of paraphrase is run to its full length ; and there is sometimes a surprising want of nerve in hitting off the force of the Greek. The words *οὐς μεν γαρ τις επεμψεν οἰδεν, αντὶ δὲ φωτῶν τευχη καὶ σποδος εἰς ἐκαστον δόμον αφικνευται*, in one of the anti-strophes of the Agamemnon, appear in the translation :—

Oh, well each knew the strong, the brave, the just,
Whom they sent forth on the horrid track
Of battle ; and what now comes back ?
Their vacant armour, and a little dust !

There is a considerable element in Dr. Milman's beautiful book of the same quality as this.

The Metamorphoses of Ovid. By John Benson Rose. London : Whittaker. 1866.

THIS is a curious book. It is an annotated poetical translation of the Metamorphoses. It is by no means without merit ; and there is much scattered up and down in it which is well worth reading. But the curiousness of the whole is its most striking feature. Its poetry is curious ; its grammar is curious ; its philology and antiquities are curious ; all is curious together. The author says, in his preface, that “the notes are offered suggestively, not dogmatically ;” that they are “crude and undigested ;” and that, in writing them, he has followed “the condemned school of Dr. Jacob Bryant, ‘Faber on the Cabeiri,’ and ‘Davies’ British Druids,’ whose records of the deluge and the ark” he has “maltreated,” and “which records,” he adds, “I sincerely wish could inoculate with some of their truth, the absurd perversions of Greek fable.” A very curious book, indeed, is this Ovid of Mr. Rose's.

The Scenery of Scotland viewed in connexion with its Physical Geology. By Archibald Geikie, F.R.S. London : Macmillan. 1866.

MR. GEIKIE is always heard with attention even by those who differ from him. He is an industrious and accomplished practical geologist, and shows much greater judgment and acuteness in his theorising than can be claimed by some of his scientific fellow-workers. This volume on Scottish Scenery, as determined by the geological constitution and history of the country, is full of interesting fact and argument. In particular, the phenomena of denudation, which, as is well known, present themselves on a gigantic scale in various parts of Scotland, are admirably defined and illustrated by the author : and he adduces strong reason in favour of the doctrine, which refers a large number of the existing surface features of the region to the action of land-ice such

as that now covering most of the area of Greenland. A carefully drawn and very beautiful geological map of Scotland, corrected up to January 1865, and bearing the *imprimatur* of Sir Roderick Murchison, with that of Mr. Geikie, is prefixed to the volume; and several wood-cuts scattered through the text enable the reader to weigh more exactly than he could otherwise do the statements and conclusions of the writer. Those who wish either to see the physical past of Scotland through the glass of the present, or its present through its past, will be abundantly rewarded by studying Mr. Geikie's work.

Home in the Holy Land. A Tale illustrating Customs and Incidents in Modern Jerusalem. By Mrs. Finn. London: Nisbet. 1866.

A LADY's book on the Holy City and its neighbourhood, very pleasant to read, and abounding in description of life behind the scenes in Jerusalem, such as few Christian women from Europe can ever see, or if they see it, are likely to describe with as much feeling, intelligence, and picturesqueness as are found in Mrs. Finn's pages. There is a happy absence from the volume of all foot and inch work; and we can testify to the exactness of many of the drawings of character and usage.

Eastward. By Norman Macleod, D.D. With Seventy Illustrations from Photographs, engraved by Joseph Swain. London: Strahan. 1866.

THIS ample and handsome drawing-room volume is a republication of a series of travel-papers, written by the editor of *Good Words*, and printed in the pages of that periodical during the course of the last year. For those who did not read the papers as thus first given to the world, it will suffice to say that they are strongly marked by the nobility of soul, the quick and versatile intelligence, and the extraordinary power of eloquent description, which distinguish the accomplished author. We are bound to add, however, that there is a great deal of trash in the papers, which Dr. Macleod's self-respect should have prevented from ever attaining a second birth.

The King and People of Fiji: Containing a Life of Thakombau; with Notices of the Fijians, their Manners, Customs, and Superstitions, previous to the Great Religious Reformation in 1854. By the Rev. Joseph Waterhouse, for Fourteen Years a Missionary in Fiji. London: Wesleyan Conference Office. 1866.

THE missionary literature of the Christian Church has seldom received a more valuable contribution than this. Even with the full

and elaborate volumes of Messrs. Williams and Calvert before us ("Fiji and the Fijians." Two Vols. London : Heylin. 1858), there is much to learn from the narrative of Mr. Waterhouse. Not to mention the personal incidents of the author's missionary career, and the detailed and highly interesting biography of the famous Thakombau, which forms a distinguishing feature of the present work, Mr. Waterhouse throws new and often important light upon the character, habits, and religious belief and observances of the land of the cannibals. It is hardly possible, perhaps, to go in advance of what is known already as to the abysmal moral degradation into which Pagan man can sink. If this be possible, the delicately-told, yet sickening records of Mr. Waterhouse's narrative will supply the means of such advance. Mr. Waterhouse wields the pen with judgment and strength, and the *tout ensemble* of his volume is all that a simple and dignified taste could ask for.

Castaway on the Auckland Isles: a Narrative of the Wreck of the "Grafton," and of the Escape of the Crew after Twenty Months' Suffering. From the Private Journals of Captain Musgrave. Edited by J. J. Shillinglaw, F.R.G.S. London : Lockwood. 1866.

IN December, 1863, Captain Musgrave and his crew were wrecked on the Auckland Isles, lying some three thousand miles south of New Zealand. In September, 1865, after a dreadful imprisonment of nearly two years, they succeeded in getting off in a small craft which they had contrived to build, and, after many perils, landed in Port Easy, a little north of the South Cape of the South Island (Stewart Island) of New Zealand. During the captivity in the Aucklands, Captain Musgrave kept a journal, written chiefly in seal's blood—the best ink he could find—and this Mr. Shillinglaw has published, together with a valuable paper of the Captain's on "The Sea Lion and its Habits," and an original account of the geography, natural history, and other characteristics of the Auckland Group. Some few passages of Captain Musgrave's record might have been dropped with advantage; but, as a whole, it presents a notable example of Christian courage, and of manly patience, fortitude, and resolution, under physical privation and suffering such as rarely fall to the lot of human kind. Young men who think of turning Robinson Crusoe should read Captain Musgrave.

Compensation and Other Poems. By Emily Jane May. London: Elliot Stock. 1865.

THE gifted authoress of these poems writes well and pleasantly. She has, doubtless, too much good sense to look for immortality; but there is so much feeling, intelligence, and quiet humour in her writing, that, if the amaranth would but come to her, we should be the last to say nay. The pieces in the volume are very unequal: but the rhythm is often good, and now and again there are true touches of the sky-born faculty.

Civil Service Appointments. By E. Lethbridge, B.A. Oxon. London : Cornish, 297, High Holborn.

THIS new guide to the Civil Service of the Crown is the work (as the preface tells us) of "one who has himself passed through the entire ordeal of the Civil Service Examinations, who now holds an appointment obtained in that way, and who has recently had some little experience in preparing candidates for similar trials." A graduate of Oxford, who is also a successful "coach" for the Civil Service, ought to be able to afford some valuable information about its examination. The first part of this useful little book is taken up with full and explicit directions and explanations as to the method of obtaining nomination, the choice of an office, the patronage of the different departments, &c.; then follow tables of subjects of examination, limit of age, &c. The conclusion (which is perhaps the most interesting and valuable part) is a critical discussion of the examinations, with hints on the requisite and best preparation for them, in a plain and familiar style, such as might be expected from a tutor to his pupils in lecture.

For those who are themselves desirous of entering the Civil Service, or who have young friends or relatives so wishing to become servants of the Crown, we know of no guide more thoroughly and practically useful than the little book before us.

Kings of Society; or, Leaders of Social, Intellectual, and Religious Progress. By the Rev. William Anderson, Author of "Self-made Men." London : Elliot Stock, 62, Pater-noster Row. 1866.

OUR readers must not imagine this to be a companion volume to the "Queens of Society," and anticipate racy anecdotes of Nash, Brummel, and the Prince Regent. Mr. Anderson's estimate of true social influence may be gathered from the names of the men on whose heads he places the coronet. "Sacred reverence," as he informs us in the preface, "prevented him from including the Author of Christianity among 'Kings of Society.' Yet the aspiration of the book after unity and completeness seemed to demand an introductory chapter on that most extensive and momentous theme." Then follows a succession of rapid sketches, presenting the leaders of the great moral revolutions which have taken place during the Christian era. The names selected are five in number—Luther, the hero of the Reformation; Cromwell, the champion of Puritanism; Raikes, the founder of Sunday Schools; Carey, the pioneer of Missions; and Pounds, the originator of Ragged Schools. How such an enumeration, aiming at completeness, could omit the name of John Wesley, is a question to be asked, not by Methodists only, but by all students of the religious history of the world. Other names of great importance might be suggested; but to present all "the leaders of the great moral Revolutions during the Christian era," would need an encyclopædia. We congratulate Mr. Anderson on having

produced an attractive and useful book. For ourselves we might prefer a more sedate and measured style; but it would be difficult to find a book we should place in the hands of an intelligent youth with greater confidence that he would read it, and that it would do him good.

The Peasant Preacher. Memorials of Mr. Charles Richardson, a Wesleyan Evangelist, commonly known as the "Lincolnshire Thrasher." With Sermon, Notes, and an Itinerary. By John E. Coulson. London: Hamilton, Adams, & Co. 1865.

THERE are hundreds of families to whom nothing more than the name of Charles Richardson will be necessary to recommend this volume. To those who did not know him, we need only say that it records the life and the eminently useful evangelical labours of a man who was almost entirely self-taught, who spent the best years of his life as an agricultural labourer, and who never addressed an audience in public until he was nearly forty years of age.

The peculiar charm of this book, if Mr. Coulson will permit us to say so without disparagement to his own well-written chapters, is, that he permits the evangelist himself, as far as possible, to tell his own story. Letters and memoranda, extending over more than twenty years of constant itinerancy, and evidently designed for the family circle in the little Lincolnshire village, will have a deep interest for those who knew the writer. Those who did not know him will seek for his character there rather than in the panegyrics of friends, and they will find in the letters the transparent simplicity of character, the unaffected modesty, the deep and steady piety which characterised the man.

At the same time, it is gratifying to find that the great pulpit influence of Mr. Richardson was legitimately attained. His natural gifts were carefully cultivated by diligent study; the sermons to which such powerful effects are ascribed were thoroughly prepared. This Lincolnshire Thrasher was not a noisy and ignorant enthusiast, as the unfortunate epithet might suggest; he was a man of strong understanding, as well as of fervid piety, and he became a workman that need not to be ashamed.

The position which Charles Richardson filled in the Church was a somewhat anomalous one. Like William Dawson, one of the most powerful orators of modern days, he was nominally a local preacher attached to a single circuit, but actually an irresponsible itinerant over the whole land. Such a position has its dangers. Let us trust that if Divine Providence see fit to raise up a succession of agents of this class, He will endow them not only with the "peasant preacher's gifts," but with his disinterestedness, his "meekness of wisdom," his ripe and fruitful piety.

The Earnest Missionary ; a Memoir of the Rev. Horatio Pearse, late General Superintendent of the Wesleyan Mission in the Port Natal District, South-Eastern Africa. By the Rev. Thornley Smith, Author of "Histories of Joseph, Moses, and Joshua," &c., &c. Second Edition. London : Hamilton, Adams & Co. 1865.

MR. THORNLEY SMITH needs no introduction to the Christian public. His present subject has many points of interest, both in the character of Mr. Pearse, and in his great work as one of the pioneers of Christian civilisation in Africa. "The missions," says the preface, "are the background of the picture in which he is here represented as one of the leading figures, and a very striking picture it is." There is considerable variety in the scenery. After the opening chapters, describing Mr. Pearse's early life, and his probationary ministry in England, we see him crossing the waters, introduced to African missionary labour, forming a new station among an entirely heathen people, learning their language, and gradually surrounding himself with a little Christian community. Then we see him in Graham's Town, labouring zealously in the midst of a mingled population of natives and Europeans, under the superintendence of William Shaw; and, lastly, in charge of the Wesleyan Mission in the colony of Port Natal, wisely and diligently administering its affairs, and in company with his colleague, and with other Protestant missionaries, standing fearlessly by the old landmarks when Bishop Colenso admitted polygamy into the Christian Church. It is the noble life of a true servant of God, not brilliant in talent, but strong in the soundness of his judgment, in the singleness of his object, and in the depth and devotedness of his piety.

We are glad to see that this interesting book has already reached a second edition.

Ten Years in South Central Polynesia ; being Reminiscences of a Personal Mission to the Friendly Islands and their Dependencies. By the Rev. Thomas West. Illustrated with a Portrait and Maps. London : James Nisbet and Co. 1865.

THIS beautiful contribution to missionary literature reached us too late to receive the extended notice which it merits, but we cannot allow the present number of the *Review* to be issued without a brief mention of it. Mr. West employed his "Ten Years in South Central Polynesia" to very good purpose. While actively engaged in the work of one of the most successful missions of modern times, he found time to make himself thoroughly acquainted with the beautiful islands which were its theatre. Their origin, which he clearly traces to volcanic agency, their geographical position and conformation, their natural productions and capabilities, are described with a precision and

completeness which must make his book a standard authority on the subject. Equally interesting are the notices of the growth of civilisation under the instruction of the missionaries, and the fostering care of the wise and energetic Christian king, George Tubou. And, best of all are the sketches of missionary toils, privations, and dangers, given in the bright and cheery spirit which become one who has not laboured and suffered in vain. We wish this beautiful book not only the wide circulation its literary merit must secure, but the success the author deserves, in promoting "a warmer and more self-sacrificing missionary spirit among Christian people."

Our Life. Illustrated by Pen and Pencil. Religious Tract Society.

ONE of the class of elegant books which have multiplied fast of late years, and which are found in radii round the flower-vase in the centre of the drawing-room table, clothed in green and gold, scarlet and gold, or gold and violet; the paper of a rich cream colour, the printing clear and fine, the woodcuts plentiful, the general effect on the mind at once entertaining and confusing. This volume seems as good as most of its kind. "Our Life" is divided into the four periods of childhood, youth, manhood, and old age; and each section of it is illustrated by a gathering of thirty or forty quotations from a wide and various field of poetry and prose from Wordsworth to N. P. Willis in merit, and with an evident intention to mingle amusement and profit. The illustrations are of average value. We are obliged to confess that an old brown volume of Bewick gives us more entire delight than the whole array of splendid cream-laid volumes produced for the drawing-room table; and it is highly to be desired for the furtherance of a pure taste and genuine love of nature, that the peculiar facilities of the wood block should be employed under impulses as noble as those which animated the great father of English wood engraving. As there is a rich feeding which ruins the digestion, so there is an over-splendid use of line and colour which vitiates the eye. Illustrations in wood should not be too ambitious in subject; nor too plentiful in quantity; nor too gorgeous in surrounding. The sphere of wood engraving in art is what the remote and intensely rural are to the poetic side of our nature; what "hamlets brown and dim discovered spires" are to the man weary of the noise of the city, or exhausted in the "dusty purlieus of the law." Within these limits it has a province which no other mode of art can invade. And even here, though we have no lack of pretty vignettes in our modern books, we want a more chastened and severe love for Nature as she is. Nature is combed, and oiled, and perfumed for us too much, and the irreverent passion for "composing" has gained such a hold in our water-colour exhibitions and pretty books that we are quite unable to understand a piece of simple nature when it is placed before us. We call it "stiff," or "quaint," or worst of all, "unnatural." Some vague nickname, such as "Pre-raffaelite," is given to work unquestion-

ably powerful and true, by those who are thus misled, and do not know nature for themselves. We hesitate to refer to the names of living men ; but have no manner of doubt that, till those who take pleasure in painting can learn to relish the unaffected simplicity and grandeur of such English aspects of landscape as we see from the hand of G. B. Boyce, and a very few others, there is no hope of much improvement in the kind of sentiment and science required for our illustrated books. Till this desirable event takes place we can only acquiesce with a faint satisfaction in the graceful and smooth results of modern book illustration, and murmur with the courtly founder of our school, " Pretty ! Pretty !"

Millais. Collected Illustrations. London and New York : Alexander Strahan. 1866.

Of course we are glad to see anything from the hand of a man of such unquestionable genius as Mr. Millais, from the earliest scribblings of adventure after a subject to his most finished pictures. Where a high faculty for design is bestowed, the most careless workings of it will have qualities which no labour, patience, or mere knowledge can reach. There is much danger in the conscious possession of gifts, which have all the simplicity and ease of instinct, lest, finding how easy it is to keep ahead of his compeers, the gift should not be always seriously exercised. Mr. Millais is capable of giving much more than a pretty lady in a crinoline, sketched in all views from front to back, and a gentleman in a coat and shiny hat, with a fold or two in his trousers, lounging in her neighbourhood. And there is danger on the part of the public, always much under the influence of eminent name, lest it should be indiscriminately profuse in admiration of what has the curious M in the corner. Many of Mr. M.'s illustrations of late have been excessively vapid and careless as to subject and thinking. This volume includes many charming illustrations of past years, gathered from various periodicals, and here and there is one really fine, as in the case of the illustration to Coleridge's " Genevieve," Tennyson's " Mariana," and the winding turret with the clapping door and swaying trees.

Man and the Gospel. By Thomas Guthrie, D.D. Alexander Strahan. 1865.

Dr. GUTHRIE's volumes are always welcome. They do not teach theology, but they touch the heart and conscience, and may help to teach ministers the art of going right home to the soul of their hearers. There are few more pure and eloquent writers of English than Dr. Guthrie ; while as a pictorial and pathetic preacher he has scarcely an equal. This volume is worthy of its author.

An Examination of Mr. J. S. Mill's Philosophy, being a Defence of Fundamental Truth. By James McCosh, LL.D., &c. London : Macmillan. 1866.

FROM this time forth Dr. McCosh must be regarded as the head of the school of "natural realism"—that is, of the school which holds fast to our intuitive convictions, and on these grounds a system of fixed and definite philosophic belief. He expounds "natural realism" according to a wiser, safer, and more thoroughly detailed and consistent method than any of its former chiefs from Reid to Hamilton. In this book he appears, not as the defender of Hamilton, but as the opponent of Mill. It is a thorough and masterly criticism, to which some day we hope to direct special attention.

A Letter to the Rev. E. B. Pusey, D.D., on His Recent Eirenicon. By John H. Newman, D.D., of the Oratory. Longmans. 1866.

THIS pamphlet will not add to Dr. Newman's reputation ; nor will it much abate the force of Dr. Pusey's exposure of the excesses of Mariolatry in the Roman Church. The Father of the Oratory tries first to make out that the present Romish doctrine has always been taught implicitly or rudimentally by the Fathers of the Church, although the full meaning of their teaching has only in later times been articulately brought out. Nothing can be weaker than this attempt. He quotes a few passages which are manifestly rhetorical, and as manifestly fall far short of modern Roman teaching. He quotes Epiphanius, who is known to have written the strongest things in derogation from the high dignities of Mary, as they are now claimed on her behalf by the Romish Church, and in opposition to any over-honouring of her, much more such worship as has long been paid her. He omits sometimes from the context of his quotations passages which would have conclusively shown that they could never have been intended to imply any such honour for our Lord's Mother as is paid in her worship. He quotes one of Tertullian's Montanist tracts—little indeed to his purpose—but still without any intimation that the tract was written by a "heretic;" and when all is done, nothing is made good for his argument.

He omits to note that the doctrines on which Mariolatry is founded, and the worship itself, are opposed by a long catena of patristic and "Catholic" witnesses of the very highest authority.

He invents a sophism, in regard to the mutual independence of *faith* and *devotion*, which will not bear a moment's reflection. It is evident that when the faith is an earnest and real faith, the devotion must answer to it. A controversialist could hardly resort to a more unworthy shift, and a more untenable paradox, than Father Newman has recourse to, when he pretends that the faith of the earliest Church

respecting the Virgin Mary was the same as that of the Bull *Ineffabilis*, but that as yet no devotion had been kindled in regard to her. Will he maintain, as respects the Apostles themselves, that their faith and their devotion were not commensurate? Or will he prefer to affirm that while the Apostles, having a fervent devotion as well as a perfect faith, honoured and worshipped the Virgin, so soon at least as she had been "assumed" to heaven, the devotion fell to nothing immediately after their age, and beyond the circle of their personal presence? He maintains that not until the latest times have "those luminous stars arisen in the ecclesiastical heavens, which were of more august dignity than any which had preceded them, and which were late in rising, for the very reason that they were specially glorious." It is thus that he accounts for the late rising of the worship of "St. Joseph," and the late perfection of the worship of Mary. If this be so, what, we may well wonder, will be ultimately the vast superiority of the devotion of the "Catholic Church" over that of St. John and St. Peter? Of course, however, Dr. Newman also endeavours to refine and attenuate the doctrine of the Immaculate Conception, and to apologise for the excesses of the popular devotion to the Virgin. And, finally, he insists upon the fact that no English Romanist doctor has gone to the length of the exuberant and ecstatic Italian saints in their devotions to the Queen of Heaven; while he endeavours to reduce the importance of some of the authorities cited by Dr. Pusey by saying he had never heard of their names. All this is very disingenuous. He professes never to have heard of *Bernardinus de Bustis*. Yet even we knew some little about this authority before. Dr. Pusey quotes him; and he is cited by Dr. Southey in regard to the Roman Mariolatry in his "*Vindiciæ Anglicanæ*." There are some matters, it is plain, which Dr. Newman is "willingly ignorant of." And as to the point that English "Catholic" writers have not gone to excess in Mariolatry, what can Dr. Newman say to the case of Dr. Faber? Besides which, it is surely of all things most curious that Dr. Newman should set up English Catholics as the purest and highest standards in respect of religious devotion. It would seem as if heresy must have purified the air. Dr. Newman may be congratulated after all on being the better "Catholic" for his original Protestant indoctrination. To blame Dr. Pusey, as he does, for laying more stress than he ought on Italian and Spanish authorities, and for not making enough of the fact that English Romanists have stopped short of foreign Catholic extravagance, is "passing strange." Some taint of the "Anglican schism" seems still to cling to Dr. Newman. He ventures to say that some of the passages quoted by Dr. Pusey fill him "with grief, and almost anger;" and that such sentiments seem to him "like a bad dream."

He takes care, with some saintly malice, as it appears to us, however, to state that Dr. Pusey himself, to his private knowledge, cherishes a strong and peculiar love and reverence for the Virgin.

The pamphlet is written by one ill at ease, who feels the poignant

force of Dr. Pusey's exposures, and cannot adequately reply to them ; who is argumentatively hard pressed on a sore subject ; and yet who finds much consolation in perceiving how near Dr. Pusey stands to his own personal position, and how thoroughly Romanist is the theology of that High Church party whom Dr. Pusey represents.

Ecce Homo : a Survey of the Life and Character of Jesus Christ. Second Edition. London : Macmillan. 1866.

THIS work is anonymous. We believe even the publishers have not been entrusted with the name of its author. It may very well be so. The writer, whoever he be, has reason enough to be ashamed of his offspring. His object is to play M. Renan without falling into the Frenchman's blunders. M. Renan endeavoured to account for Jesus Christ on the principle of His pure humanity. The world pronounced his exposition a failure. The author of *Ecce Homo* will do the same thing after a more philosophical and self-consistent fashion. With him also, "He whom we call Christ" is a mere man ; and that which made Him what He was, and which has led, through Him, to that vast complex of conditions and events which we know as the Christian system and life, is "The Enthusiasm of Humanity." This is Christ and Christianity, "The Enthusiasm of Humanity!" If philosophy must be profane, one would think it might as well keep up the appearance of being rational.

Chapters on Language. By the Frederick W. Farrar, M.A. London : Longmans. 1865.

MR. FARRAR has already achieved a name for himself by his ingenious work entitled "An Essay on the Origin of Language." His "Chapters" on the same subject will only add to his reputation. The particular aim of this later volume is to defend, in opposition to Mr. Max Müller, and to illustrate the author's original position, that language has its foundations in interjection and in imitation of natural sounds ; in other words, that the *pooh-pooh* and *bow-bow* theory, so much ridiculed by our great German philologer, is the true explanation of the mystery of human tongues. There is much force in many of Mr. Farrar's arguments. With the least possible predilection for his doctrine, we are compelled to grant, that he makes out a strong case against some of the views and dicta of Mr. Max Müller's two noble volumes. At the same time we are far less sanguine than our author appears to be as to the possibility of attaining to a clear and scientific understanding of the manner in which man's intelligence is wrought in the production of language. We are satisfied that man, divinely endowed with the faculty of speech, began to speak as soon as he began to be : he needed language ; he had the power of making it ; and he made it forthwith, and without any conscious exercise of

creative and plastic will. But how this was effected, we believe, by the very nature of the case, to be a problem, which, in all its parts and dimensions, will for ever distance the pursuit of our curiosity. We must explain the action of mind upon matter before this sphynx can be disposed of. Yet we may arrive at approximate solutions. *Onomatopœia* is one of them, perhaps the chief. Whether this principle has had all the sway which Mr. Farrar attributes to it, may be doubted. This book, however, will repay careful study. It is a very valuable contribution to the philological investigations of the day. We should not think the less of it, if it spoke more temperately of "theologians" and "orthodoxy." Are these the only foes of truth and fair inquiry which Mr. Farrar has met with? It will be an improvement in the next edition of his "Chapters on Language"—soon, we hope, to be called for—if he will tone down the passion of several not very amiable passages of his work, in which he endeavours to pillory these unfortunate bugbears of modern science.

William Shakespeare. By His Eminence Cardinal Wiseman.
London: Hurst & Blackett.

WHAT motive influenced Cardinal Wiseman to commence this work, which death has prevented him from finishing, it would be difficult to say. Certainly, it was not because his mind was so full of his subject, that it was necessary for him to give utterance to his emotions; nor that he was so profound a student of Shakespearean lore, that he could hope to add anything to our stock of knowledge in reference to the mighty bard. Indeed, judging from certain passages in his little book, it would really appear that the Cardinal indulged the pleasant paradox, that the fact of his unfitness for the task which he assigned to himself was a special proof of his fitness for it; that his lack of knowledge of the subject which he proposed to treat was in itself a valuable qualification for undertaking it. So much has been said about Shakespeare by *savans* that the speculations of a neophyte, who never saw one of his plays performed, might find favour by reason of their novelty. A man who has never read one of the Shakespearean commentators, who has never so much as opened one of the hundreds of books that have been written about Shakespeare, is such a literary rarity in these days that it is possible the Cardinal might fancy that this alone was a sufficient reason for undertaking his theme. Be this as it may, it is very certain that he has treated it in this spirit. The folly of wisdom, and the bliss of ignorance, were never more thoroughly demonstrated. Shakespeare's pre-eminence in English literature is assured, we are told; this place in universal literature is thus indicated by the Cardinal:—

"Is he so securely placed upon his pedestal that a rival may not one day thrust him from it?—is he so secure upon his throne that a rebel may not usurp it? To these interrogations I answer unhesitatingly—

Yes. In the first place, there have only been two poets in the world before Shakespeare who have attained the same position with him. Each came at the moment which closed the volume of the period past, and opened that of a new epoch. Of what preceded Homer we can know but little; the songs by bards or rhapsodists had, no doubt, preceded him, and prepared the way for the first and greatest epic. This, it is acknowledged, has never been surpassed; it became the standard of language, the steadfast rule of versification, and the model of poetical composition. His supremacy, once attained, was shaken by no competition; it was as well assured after a hundred years as it has been by thousands. Dante again stood between the remnants of the old Roman civilisation and the construction of a new and Christian system of arts and letters. He, too, consolidated the floating fragments of an indefinite language, and with them built, and then himself fitted and adorned that stately vessel which bears him through all the regions of life and of death, of glory, of trial, and of perdition. A word found in Dante is classical to the Italian ear; a form, however strange in grammar, traced to him, is considered justifiable if used by any modern sonneteer. He holds the place in his own country which Shakespeare does in ours; not only is his *terza rima* considered imitable, but the concentration of brilliant imagery in his words, the flashes of his great thoughts and the copious variety of his learning, marvellous in his age, make his volume be to this day the delight of every refined intelligence and every polished mind in Italy. And he, too, like Homer, notwithstanding the magnificent poets who succeeded him, has never for a moment lost that fascination which he alone exercises over the domain of Italian poetry. He was as much its ruler in his own age as he is in the present. In like manner the two centuries and more which have elapsed since Shakespeare's death have as completely confirmed him in his legitimate command as the same period did his two only real predecessors. No one can possibly either be placed in a similar position, or come up to his great qualities, except at the expense of the destruction of our present civilisation, the annihilation of its past traditions, the resolution of our language into jargon, and its regeneration, by a new birth, into something 'more rich and strange' than the powerful idiom which so splendidly combines the Saxon and the Norman elements. Should such a devastation and reconstruction take place, whether they come from New Zealand or from Siberia, then there may spring up the poet of that time and condition who may be the fourth in that great series of unrivalled bards, but will no more interfere with his predecessor's rights than Dante or Shakespeare does with those of Homer."

There is no reasoning here; but there is assumption which is tantamount to it. The conclusions arrived at are these:—Homer, Dante, Shakespeare, are three of the foremost names among men; Homer's is the greatest that Greece produced; Dante's the greatest that Italy produced; Shakespeare's the greatest that England has produced; *ergo*, these three stand on the same level, and are co-equal.

But the *ergo* in this case is a *non-sequitur*. Camoens was the greatest poet whom Portugal has produced; Racine the greatest poet of France; and because of this, are they to take rank with Shakespeare, Homer, and Dante? If not, then, neither Homer nor Dante has a right to rank with Shakespeare on account of national pre-eminence. *Their* equal is the English Milton; Shakespeare stands outside of all ranks—peerless, unapproachable among men not specially inspired. The Cardinal, however, was quite incapable of making critical distinctions in poetry, as is evidenced by the following passage:—"Milton, and Dryden, and Addison, and Rowe have given us specimens of high dramatic writing of no mean quality; others as well: and even these have written much and nobly, in lofty as in familiar verse; yet not one has the public judgment of the nation placed on a level with him." Passing by the confusion of language in this sentence, look at the confusion of ideas, and the lack of critical acumen which it betrays. It is a novelty to hear Rowe spoken of as a great dramatist at all; a much greater one to find him in such company as that of Milton and Dryden. It would be just as congruous to say that, although Virgil, Tasso, Wilkie, and Pye have written epic poems of considerable pretensions, not one of them has the public judgment placed on a level with Homer.

Outlines of Theology. By Alexander Vinet. Strahan. 1865.
Outlines of Philosophy. Ibid.

VINET was a master in divinity, and in all respects a very able and suggestive writer. We could wish that his best writings were studied in themselves. Meantime, as giving a taste of his quality, these baskets of fragments may be useful. Otherwise they are too broken to be very satisfactory or serviceable.

Letters from Abroad. By Henry Alford, D.D., Dean of Canterbury. London: Strahan. 1865.

Does the truly original describer of the more popular routes of Continental travel derive advantage or disadvantage from the increasing familiarity of the English public with the scenes he pourtrays? A question more curious, perhaps, than profitable; yet it was the first that suggested itself to us on the sight of Dean Alford's pleasant little book. As to the common-place observer, who sees without insight, and describes without revealing, the conclusion is foregone; for him there is no longer place; Othello's occupation is at an end. To the *untravelled* he is superseded by the eloquent tongues of their more fortunate friends; the *travelling* renounce him for their Murray; the *travelled* find no aid to their own recollections in the dim outlines and washy tints that cover his canvas. But with a writer, who has a true sense of the beautiful in art and nature, and the ability to com-

municate what he feels, we are disposed to think that the case is altogether different. We are mistaken if for him the balance of advantage does not lie on the side of these modern days of guide-books and excursion trips. Our familiarity with the ground he traverses throws an additional charm over his pages. It is pleasant to compare notes. His descriptions glow with our own recollections and associations. If we quarrel with his judgments, even that gives a zest to his narrative which our untravelled forefathers could not have felt. And where we agree to praise, especially if there is something recondite and unconventional in such commendation, how assuring to our timid connoisseurship to mutiny against the canons of art-orthodoxy in such respectable company.

That the Dean of Canterbury comes under the category of writers to whom our remarks apply will hardly be denied. He sees with his own eyes, and describes what he has seen in the very best of the "Queen's English," suffusing his descriptions with the rich colouring of a graceful fancy. Then he is an enthusiastic naturalist, a scholar, and a somewhat audacious art-critic; excellent qualities for a travelling companion in the land where art, history, and nature vie with each other in pouring their treasures on the tourist's path. If, therefore, our notion be correct that in such hands a delineation of travel rather gains than loses by the increasing familiarity of readers with the scenes pourtrayed, it can excite no wonder that the Dean's fugitive papers should be elevated to the dignity of a separate existence in the elegant little volume before us.

For ourselves, indeed, we would willingly have lingered with our author for a longer space over the better-known halting-places of his route. In Italy the most frequented spots are, generally speaking, the richest in suggestion to an original and cultivated mind. Who ever tires of comparing notes with a companion worth talking to, on the master-pieces of the Uffizi Gallery, or the resuscitated old-world life bared so strangely to the sun in the plains of Pompeii? We would gladly have dispensed with some of the Dean's glowing descriptions of natural scenery for other such passages of criticism as that upon Raphael's Transfiguration in Rome (p. 67), or the baptism of Giovanni Bellini in Vicenza (p. 226). Indeed we have just a little too much, relatively speaking, of glorious sunsets, and rocky glens, and waterfalls, and mountain panoramas. Even in poetry, it requires the highest genius to rescue from tedium any prolonged attempt at the purely descriptive. And the prose writer, if he be wise, will use sparingly and subordinately this species of composition, as the background of the skilful artist, harmonising with and throwing out into relief some drama of human life and passion. But the fact is that the Dean has succumbed to the almost irresistible temptation that assails the imaginative traveller in Italy. When every successive day is born and dies in splendour, when every turn in the road reveals some novel magnificence of scenery, and to-day's luxury of emotion is none the less intense because yesterday's preceded it; how easy to forget that what never wearies as seen in the

eternal freshness of nature, may degenerate into monotony in the best reproductions of our pen !

There is one chapter of the Dean's volume which contains graver matter than the desultory notes of an eloquent and accomplished tourist. The letter headed "From Rome" is an unsparing and indignant exposure of the abominations, protected and fomented by the Government, of the Romish religion. Indeed, throughout his volume our author is loyally and stoutly Protestant. This is refreshing in these days, when English visitors to Italy, and even clergymen and high dignitaries of the Church to which the Dean appertains, are found indulging in a license of compromise towards the practices of Popery which Italians themselves marvel at and deride. It is greatly to the credit of Dean Alford's discernment that he has kept his eyes clear of the dust with which so many of his countrymen suffer their vision to be obscured, both as to Papal teaching and as to the character of the Pope's temporal sway. He has all the right and reason on his side in making Rome responsible for what is *popularly* taught from her pulpits and sanctioned in her ceremonies. It is true that her hair-splitting scholasticism distinguishes between the doctrine as presented to the people, and the doctrine as defined by the theologians, and then again between the doctrine as defined by the theologians, and the doctrine in its present essence as *dogma*—that is, as defined and sanctioned by the *infallible* authority of the Church. And thus when attacked in the outermost defences of her popular teaching, the crafty foe does not hesitate to abandon them and retire behind the labyrinthine entrenchments thrown up by her theologians; and should they in their turn prove untenable, she has still the ultimate resource of withdrawing to her inner citadel of *dogma*, leaving to the mercy of the assailant all save the authoritative definitions of her catechisms and decrees. And the apologists of Rome take occasion from this to charge Protestant controversialists with exaggeration when they inveigh against the absurdities and abominations rife in the popular practice. Popery, say they, should be judged solely by those articles of faith, which, sanctioned by the recognised authorities of the Church, have been elevated to the rank of *dogma*; all else is individual opinion or individual practice, and has no more authority than is proportionate to the gravity and credit of the individual with whom it originates. All this tissue of sophistry is torn to shreds by the obvious answer: Popery is responsible for all that is taught and practiced by its ministers, which its central authority knows and does not repudiate. When under the very eyes of the Supreme Pontiff, special miraculous virtues are ascribed to particular paintings and images, and the people flock in multitudes to the privileged shrine, and treasure up as a potent talisman whatever has been in momentary contact with the sacred representation, and when all this materialistic worship, this Christian Fetichism, is fomented by declamation from the pulpit and by solemn processions; and by the highest ecclesiastical patronage; we have a right to charge home upon the system itself, a God-dishonouring

idolatry, and to disregard the specious subtleties of the theologians who would tell us that the true dogma of Rome only recognises the image or painting as a visible help by which the soul of the worshipper is uplifted to the Unseen Power, that is the real object of his adoration. On all this the Dean writes plainly, calling a spade a spade, with a frank directness that we feared was becoming obsolete. As to the charges he brings against the temporal government of the Pope; we do not enlarge upon them here, simply because we hope hereafter to give the whole subject an extended examination in a more prominent part of our pages. Suffice it to say for the present, that beyond all that the worthy Dean has seen and described, there lies a mystery of abomination which no passing tourist could discover, which English perverts live in Rome for years without suspecting, which the honester part of the Italian priesthood itself knows nothing of, save by rumours that are rejected as calumnies, which none know in all its breadth and depth but the chief actors in it, and partially, according to the measure of their trustiness, they through whom the principal actors work their dark and iniquitous mechanism. All this may be established by unimpeachable facts and proofs, as we hope in due time to show. But here we must close for the present, warmly recommending to our readers, Dean Alford's graceful, graphic, and outspoken pages.

Citoyenne Jacqueline. A Woman's Lot in the Great French Revolution. By Sarah Tytler. 3 Vols. Alexander Strahan. 1865.

THIS beautiful and pathetic story has already "made its mark." We give it our warm recommendation.

Idylls of the Hearth. By Joseph Verey. Aylott & Son. 1865.

THE title suggests a dangerous comparison, and is therefore, perhaps, imprudently ambitious. Mr. Verey, however, is a genuine poet. Here are the true vein and the proper finish. "At a Cottage Door" is painfully pathetic and powerful. Other pieces there are brightly pleasant. But a few might as well be omitted.

Essays on Woman's Work. By Bessie Rayner Parkes. London: A. Strahan. 1865.

THESE essays are devoted to a consideration of the changes in English society during the last eighty years, the claims of educated destitution, the profession of the teacher, business, works of benevolence, means of education, and social economy. And they open up a large question. Whatever can be done to raise respectable but dependent women as a class, in intelligence and self-reliance, and moral principle, is a work of incalculable benefit to both sexes, and to future generations. It would

lighten the burdens now laid upon society by the helplessness of those who are too proud to work, too mean to reach the rank which they covet, and too ignorant to take their place among literati, or artists, or even skilled artizans. We would recommend all such to read the essays before us, and to study especially "The words of King Lemuel, the prophecy that his mother taught him."

We appreciate the shrewdness and manifold projects of Anna Jameson, Mary Howitt, Elizabeth Barrett Browning, and Maria Rye, with a goodly host of male supporters, such as Lord Brougham, and Sir Erskine Perry; but to all the good things suggested might not another—not to say a better—be added? Why should not the promoters of "The Englishwoman's Journal" encourage the profession of NURSES, and prepare the way for hundreds who might with dignity to themselves, and blessing to English society, carry on the work of Florence Nightingale?

The Lace-makers: Sketches of Irish Character, with some Account of the Effort to Establish Lace-making in Ireland.
By Mrs. Meredith. London: Jackson, Walford & Hodder.

THE authoress of this work, a very interesting one of its class, is a lady who was an active member of that band of patriotic women by whose disinterested exertions good service was rendered to Ireland when the potato blight in 1847, and the consequent famine fever, had spread such an awful amount of destitution, disease, and death among the peasantry of that country, as almost to threaten their complete extinction, in some sections of the land at least. Lace-making, crotchet work, and sewed muslin were introduced by Mrs. Meredith and her co-workers, as industrial occupation, by which it was sought to enable the girls and women to help themselves; and success so speedily followed the attempt, with such a fair prospect of permanency, that the more sanguine promoters of the movement thought they had originated a commercial instrumentality, fully calculated, not only to meet the pressing needs of the crisis they were passing through, but also to supply abundant and constant remunerative employment to those who should be permitted to survive the famine and the pestilence. These anticipations, unfortunately, have not been realised; after years of persevering toil it is admitted that, except in a few solitary cases, the expectations of settled benefit have been disappointed, notwithstanding all the fostering care bestowed, and all the skill which the lady patronesses of the schools were enabled to enlist in their service from the ranks of the commercial world. The purpose of Mrs. Meredith in writing "The Lace-makers" appears to have been to discuss the causes of this failure, and to submit her suggestions upon the subject of removing them. In two chapters, devoted to a history of the movement and its statistics (which have already appeared in a serial publication) she works out the serious portion of her design; then follow three well-penned tales of Irish life—fictitious plots based upon

actual events, we are informed in the preface—the aim of which is to revive or create an interest in those who have shown such willingness to work when properly remunerated, and an unmistakeable aptitude for entering into successful competition, so far as design and fabric are concerned, with the producers of the most valued articles of taste and luxury. The tales are characteristic in their incidents, piquantly written, and so moderate in length that they are well fitted for occupying a brief period of leisure, while their purpose, which we have indicated, is one that commends itself to even the lightest of readers.

The Collected Writings of Edward Irving. In Five Volumes.
Edited by his Nephew, the Rev. G. Carlyle, M.A. Vol. V.
Alexander Strahan. 1865.

It would not have been proper to omit from the collection of Irving's works the discourses on the Incarnation, on the ground of which the great preacher was condemned for heresy. In the present volume all who are so minded may study the daring speculations which so violently shocked Irving's contemporaries, and which, although as held by Irving in connexion with the rest of his opinions, and as a part of his total theology, they intended no dishonour to the Incarnate Saviour, have in truth a most profane and impious sound if stated apart. Irving's own presentation of the points in controversy between himself and his critics, as given in an appendix to this volume, is very luminous. But his metaphysical speculations respecting human nature and human personality, the common ground of our humanity, and the essential distinction of our individuality, are, in our humble judgment, as precarious, if not as perilous, as his theological speculations respecting the nature and person of the Redeemer.

In deference to a general desire which has been expressed for more of Mr. Irving's writings on prophecy, Mr. Carlyle has made arrangements for publishing a supplementary volume which will include "The Last Days," and introduce us to Ben Ezra.

Miscellanies from the Writings of Edward Irving. Strahan.
1865.

A HANDSOME volume of nearly 500 pages. Of the writings of Irving we have already spoken. This volume was needed for those who could not buy the "works" *in extenso*, and will not fail to be highly prized. We predict for it a wide circulation.

An Introduction to Kachcháyana's Grammar of the Páli Language; with an Introduction, Appendix, Notes, etc. By James D'Alwis. Colombo. 1863. London: Williams & Norgate.

THE sacred language of Buddhism is daily acquiring a new interest for European scholars. At present we know little respecting it; and

an adequate Páli grammar and lexicon are still among the *desiderata* of Oriental literature. The work before us, so far as it is a grammar, is rather an antiquarian curiosity than a material help to the acquisition of the tongue in which Gotama's Sermons are written. Kachcháyana, the oldest native writer on the Páli language, is supposed to have lived several centuries before the Christian era. He is to the Buddhists what Pánini is to the Brahmins, the great authority on the language of their sacred writings. The present volume contains an English translation of the sixth book of Kachcháyana's work. Even in translation, it needs considerable practice in the methods and terminology of Eastern grammarians, not to say pretty ample explanatory notes, to come at the meaning of the venerable word-master. The style is very bare and bony, and no words are wasted for the benefit of the ignorant. You would not look for any such severity of manner on the first opening of the section. Here is Kachcháyana's exordium, slightly altered from the form under which Mr. D'Alwis presents it:—

“Learned sages, by the ship of comprehensive wisdom, cross the ocean of verbs [filled with] the water of radicals; [abounding with] the fishes of base-and-affix links, augments, and tenses; [having] the current of elision and conjugational characteristics; [foaming with] the billows of the present-perfect; [and bounded by] the shore of investigation. Hear ye my comprehensive words on verbs, which, diffused with beautiful adornments, I, after saluting the perfect Buddha of infinite knowledge, do declare so that they may be easily mastered.”

What do you say to this, Mr. Jelf and Dr. William Smith? How of the bright occidental stars of the grammatical sky of the nineteenth Christian century, now?

The original matter in Mr. D'Alwis's volume occupies nearly three times the space of his translations, and contains much recondite and important information, not only on the Páli language and literature, but also on the genius, history, and doctrine of the colossal system of Buddhism, both within and without the Ganges.

Fresh Springs of Truth: A Vindication of the Essential Principles of Christianity. London: Griffin. 1865.

THE work of a devout and gifted member of the Church of England—we suspect a clergyman, and one not very low down on the scale of his order. It contains some paradoxes; and there are positions taken in it, which we think dubious, if not unsafe. It is a remarkable book, however. The “springs” of thought in the author come from deep places, and they send forth abundant water, good and clear. High Christian feeling, strong mental muscle, large knowledge of men and things, and a pure and well-disciplined taste meet in these very suggestive pages. We cannot recommend an indiscriminate acceptance of the writer's views; he would himself advise the same reverent

independence on the part of others which he exercises on his own part; but not many books have lately issued from the British press in which there is more offered for thoughtful and serious men to think of than in this temperate, wise, and often profound "Vindication" of the truth of Christ.

Symbols of Christ. By Charles Stanford, Author of "Central Truths," etc. London: Jackson, Walford & Hodder.

THERE are passages in the sermons bearing the above title, upon the taste of which different minds will pass different judgments. As to the general character of the volume, there can be but one opinion among those who love Christian Verity, and who take pleasure in seeing her clothed in goodly raiment, teaching the people. Mr. Stanford has fine sensibilities; the quality of his thinking is firm and manly; and while he never loses sight of the earth in dealing with his great topics, he is familiar with the open sky, and brings with him everywhere the fresh, strong life of the things which eyes do not see, nor ears hear, nor hearts conceive, without supernatural influence and impulse. We trust his new volume will find numerous readers; it will not fail to yield instruction and profit to all who handle it.

Thoughts at Seventy-nine. London: Jackson, Walford, & Hodder. 1865.

WE owe these thoughts to the intelligent, modest, and ever-Christian pen of Mr. John Sheppard of Frome. They are a fitting crown to the literary labours of his long and useful life. Days here speak with wise lips, and multitude of years performs its office of teacher so as not to need to be ashamed. Essays on Theism, on the Image of God, on New Testament Precepts, and on Conscience and its Perversions, form the bulk of the volume; the remainder consisting of metrical prayers, translations, and remarks on various moral and religious topics. The reader will find much to stimulate both thought and devotion in Mr. Sheppard's graceful, instructive pages. His observations on the superiority of Christian to Pagan Theism, on the Use of Property, on Good and Bad Modes of Expense, and on Christian Self-Denial, are eminently timely in an age which sweeps away so many of the old distinctions of right and wrong, and which grudges Christianity every cubit of stature by which it lifts its head above the religion of nature. Every part of this neat and unpretending work has its value; and we doubt not it will do much good in the circles in which it is likely to gain attention.

Six Months among the Charities of Europe. By John de Liefde. Strahan. 1865.

A most interesting and useful work. It will be treated at length in our next number.

The Shipwrecked Minister and his Drowning Charge. By the Rev. F. J. Jobson, D.D. 1866.

This memorial of an awful calamity, and tribute to a faithful servant of Christ, needs no commendation from us. It is already very extensively circulated. The work could not, in so short a space, have been more effectively done. Both sermon and narrative are deeply impressive.

1. **A Concise Dictionary of the Bible for the use of Families and Schools, condensed from the larger Dictionary.** Edited by William Smith, LL.D. Murray.
2. **The Old Testament History.** From the Creation to the Return of the Jews from Captivity. Edited by William Smith, LL.D. Murray.

Two exceedingly useful volumes. The Dictionary in its larger form we have already introduced to our readers. This abridgement we can recommend with much less reserve than the original work. The history is a marvel of completeness, and exceedingly cheap.